THE FARMERS' CABINET,

AND

AMERICAN HERD-BOOK.

DEVOTED TO

AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

Perfect Agriculture is the true foundation of all trade and industry.—LIEBIG.

Vol. XI.—No. 6.] 1st mo. (January) 15th, 1847. [Whole No. 144.

PUBLISHED MONTHLY,

BY JOSIAH TATUM,

EDITOR AND PROPRIETOR,

No. 50 North Fourth Street,

PHILADELPHIA.

Price one dollar per year.—For conditions see last page.

Memorial from Agriculturists.

We find the following in the Twelfth month number of the *Farmers' Library*, which states that it is in course of circulation through the country. Our friend Skinner is disposed to leave no stone unturned in his indefatigable efforts to serve the interests of the agricultural community. And it were well to bear in mind, that when those interests are served, all others partake of the benefit; for "perfect agriculture is the true foundation of all trade and industry."—ED.

Memorial from the Agriculturists of the United States to their respective State Legislatures.

THE undersigned, on behalf of the agricultural interest, to which they belong, beg leave to request your attention to what they feel to be their just, but too long neglected claim on the General Government.

Not wishing to deal in vague generalities, the measure we solicit, is that you would urge our Representatives and Senators in Congress, to use their influence to *procure an appropriation from the proceeds of the public lands, or from the general treasure, for the use of each State, in proportion to its representation in Congress, to be applied, in each State, expressly to the establishment of a* NORMAL SCHOOL, *for the instruction and preparation of teachers in agricultural chemistry, mineralogy, vegetable and animal physiology, civil engineering, rural architecture, and practical surveying*—in such arts and sciences, in a word, as will enlighten practical agriculture, and render more efficient and profitable the capital and labour employed in it. Teachers thus prepared, would be ready to take charge of minor agricultural schools, in each county in every State of the Union; and thus would the foundation be laid for spreading among the mass of the people a knowledge of those sciences, on the application of which, according to the opinion of the ablest writers of the age, "Agriculture must hereafter depend for all material improvements."

In the name of justice to the landed interest, and in anticipation of objections as to *want of means or power*, the undersigned would refer to the very large expenditures under all administrations, not only for the establishment of naval and military academies and schools, and the publication of surveys, maps, and journals, without number, of military officers, exploring sea and land, but to the boundless acquisition of foreign territory, by acts of Congress. We may also refer to large and repeated appropria-

tions, not merely for the establishment of Observatories, and lines of Telegraph, under the control of the General Government, but to an object strictly analogous to the one we seek, to wit, the *annual Agricultural Reports from the Patent-Office.*

All these appropriations of the public money—chiefly, it is true, as connected with the military operations of the Government—have been avowedly for the purpose of collecting and distributing warlike or other information.

These facts and considerations induce your memorialists to hope that Congress will not now refuse to the people a portion of their own money, for the purpose of providing within each State, conformably with its own policy, institutions and courses of industry, schools for the instruction, also, of the *rising generation of planters and farmers* in the *principles* of that great pursuit which has been well pronounced "the nursing mother of *all the arts*,"—a pursuit upon which Congressional Reports, useful though they be in their way, can yet throw but the partial light of facts and statements promiscuously gathered up, not always well digested, and, after all, distributed or not, according to the individual pleasure and discretion of members of Congress.

For the warlike machinery and purposes of this Republican Government, embracing the objects above referred to, *several hundred millions* of dollars have been expended since our last war with a trans-Atlantic power; and this enormous expenditure has really been collected, in *very large proportion*, from the landed interest, since it is that class which has chiefly consumed the imports on which the revenue has been levied.

Your memorialists are far from repining at the liberal pay, life commissions, certain promotion, pensions, residences, hospitals, schools and academies built, provided, and kept up, at the public expense, for the two military branches of the Government; but they humbly think that the time has arrived when the people, the yeomanry of the country—those by whose toil its solid wealth is dug out of the ground—may inquire why, in what view of the "general welfare," it is that since any amount can be found to promote advancement in the science, and successful practice in the art of war, nothing can be granted for the better instruction of the rising generation of freemen in the science and practice of that great peaceful pursuit which employs, feeds, and pays all others?

Under the most despotic monarchies, men of genius who have conferred signal benefits on the industrial pursuits of the people, by scientific discoveries and useful inventions, have been lavishly rewarded, and raised to the highest honours. Mechanics, chemists, astronomers, great naturalists, and learned and enterprising men in every walk of civil life, have been there endowed with titles and fortune. If, under such Governments, stars and garters, and badges of power and respect, have stimulated to heroic deeds in fields of battle, so have they been held up as certain prizes to intellectual excellence, and great accomplishments in the arts and employments of peaceful industry. If schools have there been maintained for training youth in the art of war, so have they been maintained for teaching the application of the arts and sciences to all the industrial pursuits of life.

As republican freeholders, then, we would respectfully inquire whether it be becoming or politic for this nation, whose Government rests for security on the popular intelligence, to imitate European Governments *only* in the favour and patronage they confer, with self-preserving instinct, on that executive department of their power upon which *they* lean to protect their existence against the progress of free principles, and the force of public opinion seeking to carry them out!

It would indeed be passing strange, as it seems to your memorialists, that in a Government called free, deriving so chiefly all its resources from the agricultural interest, its powers should be so organized as to preclude the application of any portion of the public treasure to confessedly, and by far, the greatest of all public concerns! We would respectfully forbear from remarking, as it would seem to deserve, on that monstrous perversion and abuse of sovereign authority, in a Government called republican, which should reserve all life tenures, and all pensions, and all enlightenment, for the military, while it renounces the glorious faculty of aiding and rewarding the labours of intellect in the humbler, but so much more useful paths of peaceful, laborious and productive industry!

In behalf, then, not so much of themselves, as of the rising generation of agriculturists, on whom our country and its liberties must mainly depend under all vicissitudes, we call upon you, to whom we have consigned for the time the sovereign authority of the State, to demand from the General Government that something be now, at last, done to *foster Agriculture*, by diffusing that knowledge which is power, no less in the field of labour than of blood. They believe they have a right to expect for this great national purpose, so identical with the general wel-

fare, appropriations bearing some proportion to the amount which the products of agriculture bear to the aggregate wealth of the nation, and to the degree of dependence of the Government itself, and all classes under it, on that class for employment, protection, safety, and support.

Account of an Experiment in Deep Ploughing.

BY JOHN JAFFRAY, DUNBAR, EAST LOTHIAN.

THE experiment was made upon a small field, which is sixty-five feet above the level of the sea. The soil is sandy, resting upon a subsoil of sand and gravel of great depth, and so thoroughly drained by the declivity of the surrounding lands, the want of moisture is its natural effect. There is but little difference between the soil and the stratum on which it rests beyond what culture and manure have made; but, from sinking of gravel, treading of horses, and pressure of the plough, year after year, and age after age, the subsoil had become crusted, hard, and beaten, as a road. In short, from shallow ploughing, there was but little of cultivated earth; and, as on all such soils in dry seasons, the crop was scorched and scanty. With a view to render this field fruitful in any season, it was subsoiled with the Deanston plough, eighteen inches deep, and sown with wheat for crop in 1837. The great vigor and luxuriance of the crop attracted general notice; and it must have yielded an extraordinary increase, if it had not been lodged by wind and rain shortly after the ear appeared. Therefore it gave only thirty-eight bushels of grain to the acre, but three tons of straw, which proved its great strength. To this crop, one of potatoes and two of wheat succeeded; but it is the culture of this field for crop in 1841, and the result, which chiefly constitute this report.

It was all equally dressed with seaware; and four acres of the same quality and description were measured and staked off. Two of these acres were ploughed twelve inches deep, with two horses, and two of them eighteen inches deep, with four horses. These two portions in all other respects, were cultivated and managed exactly alike. They were planted with potatoes of the Don species in the last week of April, eight inches deep, twelve inches asunder, and in drills thirty inches wide, running at right-angles to the furrows of the experimental ploughing. The potatoes were planted deeper than usual, therefore the shoots were longer in coming through the ground; but when they did appear, it was with great strength and regularity. They expanded their broad deep-green leaves, and grew vigorously in the dry sandy soil, in a very severe and long continued drought. It was soon evident that the deepest ploughed portion had the advantage. The stems and branches of its plants were stronger, and they first covered the ground.

The potatoes were lifted in the last week of October, when it was found that the land ploughed twelve inches deep produced fifty-seven bolls per acre, and the land ploughed eighteen inches deep produced sixty-nine bolls per acre, being a difference of twelve bolls per imperial acre, of four cwt. to the boll.

The potatoes from the deep tillage were larger, more of one size, had fewer small ones, and not so many of a green colour as those from the other division.

The quantity on the deep tillage is eighty-seven bolls per Scots acre, which is a good crop for any year; and it will readily be granted that it is far above the average of the district this year, many fields not producing half a crop. But though this is a greater crop for the season, it must have been still greater if the field had been less exposed, as it has no shelter; and three days of very violent wind in the first week of August broke down the plants, which, from their great luxuriance, were then very tender, and checked their growth.

The practical conclusions to be drawn from this experiment are—

First, that deep ploughing increases the produce.

Next, that, as both portions of the land used in the experiment were opened up eighteen inches deep by the subsoil plough for crop in 1837, the full benefit of that operation is not obtained till the earth so loosened is again ploughed up. And the reason is evident; for it is then only that the soil is deepened, by an addition from the subsoil with which it is intermixed, and rendered more fruitful.

Lastly: if deep ploughing increases the produce, it increases also the supply of vegetable manure; and a greater portion of manure, added to improved culture, must produce a progressive increase of fertility and of produce.

CHILDREN.—Speak to a child—any child—in a calm, positive, clear voice, and he will be sure to obey you, if you speak once, and only once.—*Mrs. Sigourney.*

THE *Eureka* says that the oldest evidence of the application of steam as a power in England, is a patent granted to Thomas Savery in July, 1698.

For the Farmers' Cabinet.

Cultivation of the Peach.

Probably it is not saying too much to assert that the peach flourishes as well, if not better, in this country, than in any other part of the world. And yet the tree is subject to diseases and the ravages of insects, which shorten its life. The peach worm generally attacks the tree near the roots, the first or second year after being taken from the nursery. The usual method of managing is to examine the trees and cut out the worms with a sharp knife; but this is a tedious process, particularly for those who cultivate large orchards of one hundred acres or more.

A better method of managing is to prevent the worm from ever getting at the trees. This is easily accomplished by putting around each tree, when the orchard is planted out, three quarts of fine charcoal dust, and the same quantity of slaked lime. Mix the two articles together, and place in contact with the tree in the form of an ant-hill. Where wood ashes are more easily obtained, four quarts placed around the tree in the same manner will answer the purpose. Four quarts of poudrette will also answer a like good purpose.

Peach trees are sometimes attacked with a disease called the yellows. Our opinion is, that if trees are propagated from healthy stocks—if kept free from worms, and in all other respects properly cultivated, they will escape the yellows.

If, however, any trees are attacked, the only method of arresting the disease in the orchard, is to dig up by the roots all diseased trees, and burn them at once. One of the greatest faults in the general cultivation of the peach, is that most growers permit the trees to exhaust themselves, by letting all the fruit remain on the trees when one-half, and sometimes two-thirds of the crop should be picked, or shaken, or raked off, when the fruit is about one-quarter grown. The remaining fruit will grow to a larger size—ripen better, and command more money in market, than when the whole crop is suffered to remain on the trees.

An orchard treated as above, will produce good crops for twenty years, instead of only four to seven years, which is the longest period trees will continue in bearing with ordinary culture.

Some of the old varieties of the peach appear to be running out—this, without a doubt, is owing in many cases to propagating from old and unhealthy trees. Fortunately for the lovers of this delicious fruit, many new varieties have been brought out, which for size, beauty, flavour and productiveness, surpass the best of the old varieties.

The *Milk*, of Maryland, is a larger and finer fruit than the old *Morris White*—the flesh of the former is white to the stone. Crawford's *Early Malacaton*, ripe last of August; Crawford's *Late Malacaton*, ripe last of September; John's *Malacaton*, ripe middle of September; Huston's *Malacaton*, ripe last of September, are all superb fruits that cannot be excelled. Scott's *Nonpareil*, is a similar fruit to the four Malacaton's last mentioned, and is a September variety. *Temple's Late Free*, ripe the middle of October, is the finest late variety within our knowledge. *George the Fourth*, and *La Grange*, are also valuable new varieties. *Red Rareripe*, *Yellow Rareripe*, *Ward's Late Free*, *Smock's Late Free*, *Pool's Late Free*, *Early York*, *Troth's Early Red* and *Early Ann*, are among the best old varieties. The above named are all freestones. The following are clingstones, and valuable for ripening late in the season, *Lemon Cling*, *Oldmixon Cling*, *Late Heath Cling*, *Rodman's Cling*, *Tippecanoe*, and *Algiers Winter*.

We state for the information of new beginners, that our old and experienced peach growers always plant out trees in the spring—in no case will they plant in the fall—experience has taught them that trees planted in the fall, do not come into bearing so soon by two or three years, as those planted in the spring, and the trees never do as well.

B. G. Boswell,
Nurseryman and Fruit Grower.
No. 230 Pine street, Philadelphia.

The Potatoe Failure—Non-liability of a Tenant to pay Rent.

An important case—Macdonald *v.* Wilkie—came before the Justice of Peace Court at Dundee, on Monday week, which excited considerable interest, upwards of fifty others being contingent on the decision to be given in this one. The principal facts involved in the case are as follows:—Mr. Macdonald is the principal tenant of the Forthill of Balgillo; and he, as well as many other farmers throughout a great portion of Forfarshire—and who joined issue in the trial—has been in the practice of sub-letting detached portions of his farm to parties residing in the neighbourhood, for the purpose of growing potatoes. It seemed that the purser ploughed the ground and supplied the manure, and that the sub-tenants afforded the seed, and attended to the cleaning and culture afterwards. In consequence of the failure of the crop, the sub-tenants this year

refused to pay the stipulated rent, which, of course, is much higher than the rent paid by the purser to his landlord. In this form the case came before David Milne, Alexander Balfour, and William Thoms, Esqrs., the presiding Justices, at the instance of Mr. Macdonald, for the purpose of fully trying the question. On the part of the defenders, reference was made to the law on the point as laid down by Erskine, by which it appears "that, though the tenant should have got possession, and sown his arable grounds, the landlord cannot, by the Roman law, claim any part of the rent, if inundation, the calamity of war, the corruption of the air, or the inclemency of the weather by earthquakes, lightning, &c., had brought upon the crop damage *plusquam tolerabile*," and that though it is not exactly defined "what degree of sterility or vastation makes a loss that cannot be borne," it is said to be the common opinion that "the tenant is liable for the rent, if the produce of the crop exceed the expense of the seed and the tillage." To carry out this point, therefore, the defenders led evidence to prove the almost total failure of the crop in question; and the Justices, with reference to the foregoing authority, assoilzied all the defenders, with one exception, in which case it appears that the crop had been taken up early, and while in good condition—the defender in this instance pressing his willingness to pay. —*Kelso Chronicle.*

For the Farmers' Cabinet.

Bucks County Agricultural Exhibition.

A COMMUNICATION appeared in the fourth No. of the Cabinet, page 120, over the signature of J. P., in relation to the Bucks County Agricultural Exhibition, which may require a passing notice.

Although the writer appears to have been well pleased with viewing the "excellent stock, and good show of produce and vegetables" exhibited at Newtown, yet he was not so well pleased with the fact, that the plough for which the diploma was awarded, was a Bucks County plough, and he attempts to cast odium upon the Society through their committee, by asserting that the committee on implements awarded their diploma "before trial." Now I have the best evidence—that of the committee themselves—all of whom were of "the old Bucks County class of husbandmen," for saying that the ploughs were stopped at their request, before the furrows were cleared up, that they might view the ground before the spectators ran over it, and that they were unanimously of the opinion that the diploma plough was the best plough, and that the decision was made with special reference to the work done.

Notwithstanding Prouty's plough is so highly recommended for turning under the stubble, yet much anxiety was manifested to attach a chain to it, and complaint was made of the decision of the committee on ploughing, that it should work without one, as the others did. This certainly furnished evidence of the existence of doubts whether that plough could successfully compete in this respect. It might here be added, that for turning under a heavy coat of vegetable matter without choaking, the diploma plough stands unrivalled by the *Prouty* plough, the peculiar construction of its side cutter giving it advantages in this respect which that plough does not possess.

J. P. remarks that the committee "might have added the *Prouty* plough, after carrying a furrow two and a half inches deeper and two inches wider, finished her task, leaving the Wiggins plough five furrows to turn;" but it appears they were men who did not choose to make such an assertion. The space ploughed has been measured and the furrows counted. The *Prouty* plough ploughed 22 feet 6 inches, turning down the sod at 22 furrows; the *Wiggins* plough ploughed 23 feet 6 inches, turning down the sod at 24 furrows, making a difference of about one-half inch, instead of two inches, in the width of furrow. For this fact I refer to Edward Leedom, who owns the soil ploughed, and assisted in measuring it. The depth ploughed cannot now be accurately measured, but I have conversed with many individuals upon the subject, some of whom paid particular attention to it at the time, and none of them believe that the Prouty plough ploughed more than one inch deeper, and some of them not near that much. The time of ploughing depends very much upon the speed of the team, and the committee did not limit the ploughmen as to time.

That the *Wiggins diploma* plough is not entirely destitute of merit, appears from the fact, that the second premium was awarded to it at the exhibition of the Philadelphia Agricultural Society, where Prouty had three ploughs entered; and I believe the plough and those who entered it, were entirely unknown before the exhibition to every member of that committee; therefore I think the premium in this case was not awarded "before trial."

In conclusion, if the Prouty and Mears plough "performed the best work that J. P. had witnessed the present season," and "it called forth the admiration of the congregated mass of spectators, without a dissent-

ing voice," why he should have returned with his ploughs again to Newtown, complaining that he was not satisfied, but wished them tried again, I cannot conjecture. I believe there are still dissenting voices after his second trial. As a member of the Bucks County Agricultural Society, I extend to J. P. a cordial invitation to meet with us again at Newtown at our next exhibition, hoping that the committee on ploughing will correct the error into which they fell, that of not arranging the list of ploughs in their report according to the order in which they ploughed in the field.

A Bucks County Farmer.

Twelfth mo. 17th, 1846.

Good Domestics.

We have observed that persons much addicted to complaining of servants, and to dismissing them for real or imaginary offences, seldom find their own condition improved by the change. On the part of employers, the habit of fault-finding too often but aggravates the evils of neglect and disobedience on the part of domestics, and those will seldom be pleased, who show no disposition to be pleased. It is human nature to be seldom amiable when unhappy. There are but few ungenerous, obdurate persons, who will not be more moved and swayed by a pleasant smile and ten words of kindness and encouragement, than by long lectures on the duty of servants, or whole volleys of censure. It is ever bad policy, as it is unjust, to have a quick eye to faults and to be blind to good actions. And in families as in States, those govern best who govern little, and rather by invisible influences and the contrivances and circumlocutions of discretion and charity, than by unmasked authority and force. In fine, in the domestic circle affection must be law, and domestics must come within the circle of a deep and generous regard. Who can estimate the value of a long tried and faithful servant? Nearly a century ago Lady Montague wrote:

"I would not every day tell my footman, if I kept any, that his whole fraternity were a pack of scoundrels, that lying and stealing were inseparable qualities from their cloth, that I should think myself very happy in them if they confine themselves to innocent lies, and would only steal candles' ends; on the contrary, I would say in their presence that birth and money were accidents of fortune, that no man was to be seriously despised for wanting them; that an honest and faithful servant was a character of more value than an insolent and corrupt lord; that the real distinction between man and man lay in his integrity, which in one shape or another generally met with its reward in the world, and could not fail of giving the highest pleasure, by consciousness of virtue, which every man feels that is so happy as to possess it."—*Journal of Commerce.*

For the Farmers' Cabinet.

Large Farm in Maryland.

To the Editor,—The intelligent and wealthy citizens of our country have it in their power to do much good, particularly those who have travelled in Europe, and have closely observed the manners and habits of the people, and their mode of living and conducting business, whether in agriculture, commerce, or manufactures. When such individuals, after having availed themselves of the advantages of their position, fix their minds on the accomplishment of any great object for the benefit of others, their good judgment, perseverance, and ample means, will generally bear them out in such an undertaking.

The truth of the above remarks were verified, when on a visit a few weeks since, in company with a friend, to the extensive and highly cultivated farm of George Patterson, Esq., near Sykesville, Carroll county, Md. We were indeed astonished at the magnitude of his operations, and the apparent evidences of his success. The improvements made on his farm of near 1800 acres,—1200 of which are under cultivation—in the space of a few years, are truly wonderful. He informed us that it was destitute of grass of any description, and some parts covered with moss, at the time he commenced farming. It is now producing heavy crops of wheat, corn, oats, hay, &c., &c. Many of the fields are laid down permanently in grass for grazing purposes, and have the appearance of the fine lands in parts of Chester county, Pa. This wonderful change in the fertility of the soil, has been brought about principally by the use of lime. The practice of Mr. Patterson, as he informed us, was to spread on the surface about 100 bushels per acre, which after lying from three to five years, was ploughed under, and the ground planted with corn, and after undergoing a course of farming, is sowed liberally with grass seeds.

Many of his fields have had a second dressing of lime, equal to, or greater than the first, making upwards of 200 bushels of lime to the acre. On such, the natural grasses are forming a good sward of the best quality of grass for grazing.

The farm is undulating and well watered. The low grounds are neatly and perfectly

underdrained. Handsome belts of woodland are left in different places for protection from storms, as also for ornament, forming a picturesque and beautiful sight. Mr. Patterson informed us that he had applied nearly one hundred and eighty thousand bushels of lime; and with the large stock that he is now enabled to keep, he makes in addition, a great quantity of manure, which he uses principally in top-dressing, considering that the best mode of applying it. His fields are necessarily large, but well fenced. On the farm are upwards of 18,000 pannels of post-and-rail fence, all appearing in good condition. In addition to the main farm buildings, there are a number of hay-houses on different parts of the estate, for greater convenience of storing hay, &c., and for feeding.

The principal roads over the farm are turnpiked, for the purpose of enabling the teams to do more hauling during the wet season. Gates neatly hung, are used in place of bars, affording a great convenience and saving of time.

The regular stock of cattle kept on the farm are of the pure Devon blood, chiefly descended from his own importations, and obtained from that celebrated farmer and breeder, Mr. Bloomfield, of Norfolk, England. A more magnificent herd could not perhaps be found in any country at this time. I believe they number about 60 head. We examined a young bull of beautiful form, possessing all the fine points of his race—he had just arrived from England. Mr. Patterson informed us that it was his practice to import a young bull about every three years, in order to keep up a steady improvement in his herd, thereby evincing much skill as a breeder, and great liberality and spirit as a citizen.

In addition to the above, a large number of cattle are purchased annually and fattened for the markets. We were shown several large flocks of fine sheep of mixed blood, and also some superior Southdowns. Also a large number of swine of the Berkshire breed, which were preferred to any other kind, on account of the superiority of their meat for the table.

We saw on the farm in different lots, a number of fine blooded brood mares and their colts, and some crosses with a fine Northern bred horse, producing highly valuable and splendid road horses.

The skilful management displayed by the spirited owner of this noble estate, was highly gratifying, and caused my friend and myself to wish that hundreds more of our countrymen possessing talents and fortune, were engaged in the same honourable and useful pursuit.

After having spent some hours with Mr. Patterson in riding over the estate, and partaking of his kind hospitality, we left to meet the cars for Baltimore, highly gratified with our visit. A. C.

Philadelphia, Dec. 22nd, 1846.

Milk for the People.

THERE exist on Long Island, near Brooklyn, several *manufactories* of milk—the process of which should be known. One of these *dairies* covers a space of 600 feet front by 300 deep, carefully fenced in, so as to be as private as possible—the business of the people being to *drink* the milk, not to know how it is *made*—in which enclosure 400 cows are kept the whole year round. These cows are fed on the refuse slop of the whiskey distilleries, and it is given to them *warm*. Each barrel costs six cents, but being adulterated with water and cheap feed, brings the price still less. Such is the fondness of the cows for this vile compound, that after having fed upon it for a week or more, their appetites become so depraved that they will take no other food. The result is their milk-producing organs are stimulated to a wonderful degree; they yield enormously, but soon become diseased; their gums ulcerate, their teeth drop out, and their breath becomes fetid. Though thus diseased, they do not fall away in flesh, but on the contrary puff up and bloat to an appearance of great fatness; their joints become stiff, so that they cannot lie down, and rarely or never come out alive. Bad as this is, the milk is afterward mixed with molasses, water and whiting, and then sold to the people of New York for pure milk! Any one may observe the thirty-six vans that carry it around every morning. It is of course very injurious to children, who use it in much greater quanties than adults. Some idea may be formed of the profit made by computing one barrel of slop to a cow, costing sixpence, and the milk produced being eighty cents!—*New York Paper.*

ECONOMY IN COOKING CRANBERRIES.—To each quart of berries, very shortly after the cooking of them is commenced, add a teaspoonful of sal æratus. This will so neutralize the acid which they contain, as to make it necessary to use only one-fourth part as much sugar as would have been requisite, had they been cooked without using sal æratus.

LANDS should be well drained before they are manured.

From Downing's Horticulturist.

To Renovate an "Outcast."

It is very rarely that experiments are properly made or accurately reported. The following one, on a subject highly interesting to every cultivator of the *Pear tree* on the sea-board, appears to us highly satisfactory in both respects.

Such of our readers as are familiar with the Appendix to our work on Fruits, are well aware that we do not believe in the natural "running out" of varieties. In other words, we are confident that wherever a variety, once productive and excellent in a certain soil, fails, it is for the want of certain conditions necessary to its success. Either it has exhausted the soil of those constituents necessary to health and productiveness; or if the tree is a young one, and immediately shows signs of decay, it is evident that it has been propagated from an unhealthy and diseased stock.

The hints we gave our correspondent below, were based on some chemical notions, which were only vague theory then, but which subsequent observations have given us greater confidence in. The renovating substances that we recommended in this case, were intended to be adapted to the peculiarities of the soil of J. B. W.; but all the alteration which we are able, even now, to suggest for other sites, would be to substitute air-slaked *lime* for *charcoal*, in heavier soils, that are naturally deficient in the former substance.

The salts of iron, and especially *sulphate of iron*, have a specific action upon the disease which attacks, in unfavourable soil or climate, the epidermis of the pear and other plants, both on the leaf and fruit. Observations of the occasional results of blacksmith's cinders, applied to this tree, in various parts of the country, first drew our attention to this fact. We have lately seen a paper, read before the Academy of Sciences at Paris, by M. Boussingault, bearing directly on the diseases of plants as affected by the salts of iron, which confirm and extend our own crude views on this subject. The substance of this essay we shall, at some convenient moment, lay before our readers.

In the mean time, we beg the attention of our readers to the plain and simple mode adopted in the experiment below. If, as we are convinced, a tree, which some have condemned as an "outcast" from pomological society, may be renovated so easily as this, it is quite worth while to "spare" it. The quantities of the substances added to the soil to renovate it, were, it should be remembered, applied to a tree nearly *full grown*. One-half, one-fourth, or less, should, of course, be used to trees of correspondingly less size and age.

A hint may be taken from this treatment of old trees, for the better culture of young ones on soil naturally unfavourable.—Ed.

To the Editor of the Horticulturist.

You will remember the conversation we had together three years ago, about the apparently worn out condition of my Virgalieu or St. Michael pear trees. I spoke of them then, in the language of Knight and Kenrick, as "degenerate outcasts." Though they had once borne me excellent crops of fruit, which I have never seen surpassed, yet for several years they had only produced cracked, blighted, miserable fruit—indeed such as was absolutely worthless.

I remarked to you, that I considered the variety worn out, and good for nothing in my neighbourhood, and that I intended to cut down my trees, which were large and fine, and ought to yield every year several bushels.

My situation is a sheltered one in Westchester county; and after some inquiries about my soil, which is a light, though excellent, sandy loam, you told me that you believed the trees had exhausted the proper elements from the soil; that in consequence the fruit failed, and recommended me, instead of cutting them down, to renovate them.

Struck with the force of your reasoning at the time, which I have not leisure now to repeat to your readers, I determined to make a trial with two trees. I did so in the fall of 1843. I have now the pleasure of repeating in writing, what I told you verbally, that I have now had two crops of beautiful fair fruit, as excellent as the finest that grew upon my soil twenty years ago.

As many persons about New York and Long Island, have trees of the Doyenné or Virgalieu pear in the same degenerate condition in which mine were, I comply with your request to give a simple statement of my proceeding with my trees, premising in the outset, that it is entirely based upon the hints I received from you.

In the month of October, 1843, I took in hand two large and thrifty Virgalieu pear trees, about twenty or thirty feet in height. I first scraped off all the rough outer coat of bark, and coated the trunk of the tree over with soft soap, put on with a paint brush. I next cut out about one-third of all the poorest branches, and shortened the head of the tree one-third, by "heading back" the principal limbs, covering the wounds after

paring them, with the "shellac solution,"—the best thing I have ever tried—recommended on page 32, of the "Fruits and Fruit Trees of America."

I then dug a trench four feet wide around the whole ball of roots, very much as if I were going to transplant it. I left a ball of roots untouched, about six feet in diameter. The roots—all the roots, large or small—that extended beyond this ball, I cut off; and I should judge that I cut off about one-third of the roots; or, as you advised me, about an equal proportion to the branches reduced.

The trench itself, which was four feet wide, I dug twenty inches deep; and carted away all the old soil from it to another part of my garden. I next carted in an equal quantity of soil from a field of good pasture, where the sod had not been broken up for several years. I drew this earth, composed pretty largely of the sod itself, and filled the trench around both trees.

To each tree I then applied the following substances, viz., two bushels of refuse or scoriæ from a blacksmith's forge, two bushels of charcoal pretty well broken, and two pounds of potash well pulverized. These substances I had on the spot, and mingled them with the fresh soil as it was put in the trench. After the trench was full of soil containing these stimulants, I had the whole of its contents thoroughly intermixed, by turning them over and over again with the spade. This is the whole of the process. Now a word about the results.

The first summer after the trees had been operated upon—that of 1844—I was surprised and delighted with the luxuriance and vigor of the new growth. It was very healthy, and had the appearance of that of a very fine young tree. Suffice it to say, the tree had formed a new and handsome head.

Next season, 1845, it blossomed moderately. But almost every blossom set, and gave me a fruit. Every fruit, to my great joy and satisfaction, was large, fair and smooth; the growth was clean and healthy, and the leaves dark green in colour.

This year I have had a fine crop: two bushels from one tree, four bushels from the other. They were superb fruit—genuine, oldfashioned Virgalieus; and I cannot doubt that my trees will continue to bear such for many years.

I need not say, that I and many others are convinced by this experiment, that the pear tree, of many sorts in my neighbourhood, have failed from a want of proper sustenance in the soil. Whether the recipe you gave me, may be improved upon or not, I cannot say; but I can say, that, so far, it has answered perfectly; and it is my belief that every old and enfeebled pear tree that bears cracked fruit, may be restored to good health and a fine bearing condition, by following the same rules. J. B. W.

For the Farmers' Cabinet.

Potatoe Disease.

A GREAT deal has been said about the disease of the potatoe, and many have been the conjectures concerning the cause, and various the remedies proposed, all of which prove abortive at times, owing to the different circumstances under which the remedies are applied.

If we knew exactly the cause, it might not always be in our power to apply the remedy, because the season, over which we have no control, influences the potatoe to a great extent. In the observations that I have been able to make, it appears that the disease is produced by one main cause, and various contingencies may induce that cause. The grand cause of which I speak, seems to be the rupture of the sap vessels. The many things that contribute to bring this about, are rich soil, heat, moisture, dark colour in the soil, and anything else that aids the growth of the plant, especially if that growth cannot be kept uniform; for it may be after all, sudden expansions and contractions that cause the rupture of the vessels.

Well does *Chemico* say, that large heavy tops imbibe certain elements destructive to the potatoe. It must have been observed by all, that low situations are the least calculated to produce sound potatoes, owing to the great variety of temperature; the valleys being warmer than the hills when the sun shines, but colder at night.

Have potatoes ever rotted that were grown on high ground, thin light coloured soil, in a cool dry season? if they have when properly taken care of, I will give the question up. In the spring of 1845, I planted a small lot of potatoes very early; in a few days they were up and looked well;—a frost killed them to the ground—they grew again—were cut down—and a third time were cut down by frost. By this time vitality was nearly exhausted, and the next growth was very weak and small, not half the usual size, and they continued dwarfish all the season; the produce was only tolerable, but there was not the least symptom of disease about the potatoes; though most of the circumstances by which they were surrounded were unfavourable. Any ingredient that tends to retard decomposition in the soil, would, no

doubt, secure the potatoe against the rot in a great measure.

M. T. Johnson.

Short Creek, Ohio.

Ploughing Match.

A PLOUGHING MATCH took place in Montgomery, Orange county, on the 28th of October, at which $50, a sum which had been contributed for the occasion, was awarded in premiums. A correspondent who was present at the trial, furnishes us with the following account:

The day was fine and the attendance large. The competitors numbered sixteen; the ground was very smooth and in excellent order, and some of the work was most admirably done. Capt. Robinson, of Newburgh, was here with a highly finished plough of Minor & Horton's, No. 22. His team—horses—were well trained to the work, and the ploughman understood his business. He ploughed his land, one-quarter acre, in thirty-four minutes, and in a style that no connoisseur of ploughing could find fault with. From beginning until the last, each and every furrow was as straight as a drawn line, and turned handsomely over. Our friend, Capt. R., takes great interest in ploughing, and offers to make a large bet at considerable odds, that he can beat any one in the county,—the judges to come from a distance. John Wait held a plough that was got up in beautiful style by Minor & Horton,—No. 21,—for the occasion. The team was horses, a pair of poor, jaded hacks; but the plough was of such light draft that it required but little exertion for the team, and scarcely an effort for Mr. W. to hold it, so level and even did it run. The furrow-slice was not as wide as Capt. R.'s, and was cut and turned with the utmost neatness and precision—not the least shadow of any deviation from a straight line could be perceived. There was a plough from the shop of Speer & Wilson, Newburgh, held by Edward Wait. This plough, but little known, even in this county, made excellent work, and by many spectators was thought to be equal to any in the field. There were some four or five others that made very good work; and all the competitors ploughed their one-fourth acre within the hour.

Everything passed off satisfactorily until the report of the judges was read, when much disapprobation was shown; not so much by the competitors as by the spectators. The judges were selected in the morning, just before the ploughing began, and are generally good practical farmers and well-meaning men; but their views of what constitutes good ploughing, are sadly at variance with what we have been learning through the columns of the Cultivator, and other works on agriculture. We have been taught that good ploughing consists in turning a straight furrow, with great exactness of width and depth, either flat, or slightly lapped. But our friends, the judges, at the grand match, would have us believe this is all wrong; that the right ploughing is that which leaves the furrow on the edge, or in as rough a state as possible. They say that this is the best way "to plough for a crop." Now, if this is so, if the rough, broken furrow is the best ploughing, we shall have to discard the so-called improved ploughs, and return to the old-fashioned "hog-plough;" and as to having ploughing matches, they would be a great farce; for who wants to witness a thing where neither skill nor judgment is called into exercise.—*Cultivator.*

For the Farmers' Cabinet.

Fruit Trees.

Fruit Trees.—One of the greatest drawbacks with which fruit raisers have to contend, is the late frosts in the spring; against which there appears to be no complete remedy. But in order to have as great security as possible, we should plant our trees on the most elevated portions of land we have; for cold, like water, seeks the lowest places. If any one wants a familiar illustration, let him hang a kettle of water over a fire sufficient to heat it, and thrust his hand to the bottom, he will soon discover the philosophy of it.

Near large water courses fruit is frequently preserved by the fog, which rises in consequence of the great difference between the temperature of the water and the atmosphere.

M. T. J.

For the Farmers' Cabinet.

Weevil.

Weevil.—I spent the year 1830 in Charles City county, Va., and there for the first time became acquainted with the destructive effects of the weevil, to avoid which the inhabitants threshed out their wheat—or trod it out with horses—and let it remain in the chaff until it was needed for use—it was got out very soon after harvest. The corn was permitted to stand in the field until the stem connecting the ear and stalk was completely dry, then housed with the husk on, and kept so till needed for use; this course seemed to afford protection against the weevil.

M. T. J.

For the Farmers' Cabinet.

A Method for Destroying Weevils, Moths and other insects injurious to Wheat.

Mr. Editor,—Having read in your November Number your article on insects destroying corn and wheat, and Dr. Harris's letter on the same subject; it brought to my mind an article which I had read in the *Annales de Roville*, an excellent book from the pen of the late Mathieu de Dombasle. Although, in my opinion, it is useful to us farmers to be able to identify the enemy, still we are not much benefited, unless furnished with a means of destroying him. I have therefore translated and herewith send you the abovementioned article. If you think it may be of any use, you may insert the whole, or part of it in your paper. B.

Dec. 12th, 1846.

"A multitude of means for destroying insects that devour wheat in granaries, have been suggested at different times; but it must be acknowledged that we are still in want of an easy and economical process, which should fulfil with certainty the intended object, without presenting objections of a nature precluding its constant and habitual use. I have some hope of these requisites being found united in the method I am going to describe, which has been communicated to me by an enlightened and trustworthy farmer who lives in my neighbourhood, and who has been completely successful in its application.

"The idea must have occurred frequently of applying sulphurous acid gas—the vapour which escapes from burning brimstone—to the destruction of insects injurious to grain; we know, indeed, with what promptitude this gas occasions the death of all insects exposed to it: the only difficulty might be in finding a simple and easy way of thoroughly penetrating with this gas the mass of infested grain. Should there be merely brimstone burned in the room where the grain is stored, it is probable that only the surface of the heap would be penetrated at a very inconsiderable depth; it would besides require the production of an enormous quantity of gas, as the whole contents of the granary must be filled with it, to obtain even such an incomplete effect. The above mentioned farmer has contrived an ingenious way of applying the gas, which I think will answer every purpose with ease and economy. He proceeds as follows:—he makes use of two empty casks, containing each two or three *hectolitres*,* which are placed on two joists ten or twelve feet long, laid on the floor as they are usually disposed in a wine cellar. This apparatus should be placed in the granary so as to have sufficient space to circulate all round. The casks have an opening a little larger than a common bung-hole. Through this opening the cask is filled with sulphurous gas, by burning a brimstone match, in the same way as coopers do for wine casks.† The wheat is then by means of a funnel poured into the cask until completely full, and it takes the place of the gas. While the match is burning in one cask, the other is filled with grain and being rolled to the extremity of the joists, which ought to be raised one foot above the floor; the wheat is poured out on the floor, when it is raked in a heap to one side. Two men working in this way, may, in a few hours, saturate with sulphurous gas a considerable quantity of grain; for this operation is about as speedy as that of measuring wheat.

"It is easily understood that, in this process the grains of wheat separating from each other when falling through an atmosphere of sulphurous gas, are impregnated with it all over, and that it is impossible for one single grain in the whole not to be reached by it. The air which fills the interstices between the grains is so impregnated with this gas, that no insect can possibly live many seconds in it.

"This method seems to me to insure the destruction of all insects that may be contained in wheat, whether they are in the state of larva or in the state of perfect insect; but I am not as certain that the eggs shall lose the faculty of hatching. This question will demand new researches. At any rate, admitting that the eggs might withstand the action of the gas, the performance of this process is so easy and requires so little expense, that even if it had to be repeated when new insects should have hatched, the inconvenience would be trifling; and the evil would be cut in the root by destroying at once a whole generation, as no new eggs could be produced.

"To take off the smell that the grain might have contracted by this operation, it will be sufficient to stir two or three times in the space of a few days, the heap of sulphurated wheat, acid sulphurous gas being eminently volatile; and the farmer who

* An hectolitre is equal to 22 gallons English measure.

† This operation is performed by fastening the match at the end of a wire which is introduced at the bung-hole. The match must be placed as low as may be without danger of setting fire to the cask. The floor of granaries in France are generally laid with bricks. On board floors some precautions should be used.

practised it assured me, that no taste or odor is preserved in the flour or bread proceeding from that wheat.

"Some precautions ought to be observed in using this process, in order that the labourers should not be suffocated by the gas emitted in the granary. The latter should be well aired by two large openings situated at opposite sides; and the operation should be performed when the wind blows hard enough to create a strong draught. The person who pours the grain in the cask being the most liable to be incommoded by the gas which is displaced, must always put himself to the windward side of the cask.

"For the use of large establishments an apparatus might be easily contrived, by means of which the operation could be performed in a continuous manner, by introducing a stream of sulphurous gas in a vertical tube made of four boards, through which the grain would be sent from the upper to the lower story; but for the use of a farmer, or of any other person not having a very large quantity of grain to be operated upon, I think the use of casks will be the most commodious application of this method.

"I think it probable that the germinative faculty shall not be affected in the grain by the application of sulphurous gas; but it may be interestiing to inquire whether this application would not be more efficacious against the propagation of smut, than the other methods hitherto employed. If it be indeed true, as is generally believed, that the action of lime and of sulphate of copper destroys the seminiform buds of smut, we may anticipate the same and a more energetic effect from acid sulphurous gas; and the application of this process would be certainly the easiest and the least expensive of all those, that have been hitherto suggested to answer the purpose."

For the Farmers' Cabinet.

Observations on the Potatoe Disease.

Mr. Editor,—You are aware that many persons believe that the potatoe disease is caused by wet weather. This is more particularly the case in Europe. There, the wet weather that has preceded and attended the disease, has been, so far, very constant. I have before me a paper giving the most distressing accounts of the disease in Ireland, in which it is stated that about the commencement of August, there were a few very foggy nights, and that during this time the potatoes became attacked with the disease, and in less than a week, the fields which at that season should present a vivid green, looked as black and as withered as if the month was October, not August. This fact, with many others of a like nature, induce them to think that the fog and wet weather are causes of the disease.

I have mentioned in one of my communications that heat and moisture are necessary for decay. In the early part of the month of August there is always sufficient heat for decay, and the only remaining ingredient, moisture, being furnished by the fog, we should not at all be astonished at the rapid progress of the disease, and that the fields which had looked so beautiful, should so soon change and put on the livery of death. The decay of other vegetation, and other causes generated carbonic acid, which killed the potatoe tops; these rotted and increased the supply of carbonic acid. The potatoes themselves absorbed the carbonic acid, and they, too, began to rot; and unless the heat and dampness were decreased, there would hardly a potatoe be seen at the commencement of October.

Decomposition, however, may progress without moisture, but in such cases it requires more heat. Fire will decompose wood and other vegetable matter, even when very little moisture be present; in fact, the less moisture there is present, the more rapidly the decomposition progresses. This decomposition generates carbonic acid, as in the slower processes. But decomposition will progress very fast with much less heat, provided there be moisture present. The hydrogen of the water seems to aid the decay. Thus, when the water is sufficiently abundant to supply the full quantity of hydrogen that can be used by the decaying vegetable, even if the heat be not very great, the work of decay progresses very rapidly, generating carbonic acid, and diseasing and destroying the potatoes. Hence the reason is obvious why the potatoes decayed so rapidly in Ireland at the time of the fog.

Had the potatoes been supplied with fresh and strong alkaline substances, they would have been enabled to absorb all the carbonic acid, and appropriate it to the formation of starch, and thus escaped death and decay. But being starved out of this substance, which enters largely into their formation, they were weakly, and where they were thus exposed, they could not do anything else than yield to the powerful influence of the disease. Thus the cause which should have been the farmers' friend, and increased his crop, has, in consequence of his want of knowledge of its nature, been to him a most dreadful and unsparing enemy. May

intelligence progress, and may our sufferings from this cause soon come to an end.

CHEMICO.

CACTUS.—The Cactus tribe, as such of our readers as are familiar with Mexican products are aware, is not a family of plants merely curious to the botanist or plant collector. On one of the species, C. *cochinillifera*, the Cochineal insect feeds, that insect which produces the splendid scarlet dye, so well known in commerce. Mexico has the entire monopoly of this product, and the fertile district of Oaxaca is that in which it is chiefly cultivated. Some idea of the value of this little red insect, apparently so insignificant, may be obtained, when we mention that the annual export of it now amounts to above one million of dollars, and according to Humboldt, two millions dollars worth of it have been exported in a single year.—*Horticulturist.*

EARLE'S PLANTING PLOUGH.—A. B. Earle, of Broome county, New York, has invented a planting plough, of interest to those who have seeds to plant. It has a pretty contrivance by which corn, pumpkin seeds, and some kinds of manure may be at one time deposited in the same hill, or only one may be used, at the option of the user. The rows or hills will be at equal distances one from the other, and may be regulated to suit occasion. The machine may be made so as to plant several rows at the same time, if drawn by a horse. The single machine, however, may be urged forward by a man, as he would force a common wheelbarrow, and in that way he will plant, that is, open a drill, deposit one or more kinds of seeds, any given number in a hill, as fast as a man can walk. The machine can be made and sold for $20. Patent pending.—*Eureka.*

HOW TO JUDGE CATTLE.—In all domestic animals, the skin, or hide, forms one of the best means by which to estimate their fattening properties. In the handling of oxen, if the hide be found soft and silky to touch, it affords a proof of tendency to take meat. A beast having a perfect touch will have a thick loose skin, floating, as it were, on a layer of soft fat, yielding to the slightest pressure, and springing back towards the finger like a piece of soft leather. Such a skin will be usually covered with an abundance of soft, glossy hair, feeling like a bed of mossy skin. But a thick set, hard, short hair, always handles hard, and indicates a hard feeder.

AGRICULTURAL STATISTICS OF N. YORK.—The following statistics of agriculture are furnished by the Marshals employed to take the census of 1845:

Acres of improved land in the State,	11,767,276
Acres of barley under cultivation,	192,503
Bushels of barley raised,	3,108,704
Acres of peas under cultivation,	117,379
Bushels of peas raised,	1,761,503
Acres of rye sown,	317,099
Bushels of rye harvested,	2,966,322
Acres of oats sown,	1,026,915
Bushels of oats harvested,	26,323,051
Acres of beans under cultivation,	16,231
Bushels of beans raised,	162,187
Acres of buckwheat under cultivation,	255,495
Bushels of buckwheat raised,	3,634,679
Acres of turnips under cultivation,	15,322
Bushels of turnips raised,	1,350,332
Acres of potatoes under cultivation,	255,762
Bushels of potatoes raised,	23,653,418
Acres of flax under cultivation,	46,089
Pounds of flax raised,	2,897,062
Acres of wheat sown,	1,013,655
" wheat harvested,	958,233
Bushels of wheat raised,	13,391,770
Acres of corn sown,	595,134
Bushels of corn harvested,	14,722,114

[*American Agriculturist.*

LIME.—Lime, commonly called calcareous earth, is never found naturally in a pure state, but in combination with the acids—chiefly with the carbonic, for which it has so strong an affinity that it attracts it from the atmosphere. The burning of limestone is undertaken for no other purpose than to expel by heat this gas, and reduce the base to a caustic powder, in which state it has a strong tendency to absorb first moisture, and then the carbonic acid of which it had been deprived. Lime blends the qualities of clay and sand, occupying a middle place between the two. In its caustic state it is a powerful promoter of putrefaction, or decomposer of animal and vegetable matter, to which circumstance is owing, to a certain extent, its efficacy as a manure. Lime also helps to fix the carbonic acid which is generated by the fermentation of putrescent manures in the soil, or which floats in the air on the surface of the earth, and it freely imparts this gas, in union with water, for the nourishment of plants. Lime is therefore an exceedingly valuable ingredient to the farmer; and, accordingly, wherever agriculture is carried on with spirit, it is eagerly sought after, though it sometimes bears a very high price.—*Chambers's Information, &c.*

Destroying the Grub and Wire-worm.

In a recent conversation with an intelligent farmer of Cayuga county, N. Y., he described the method by which he saved his corn crop from the destruction of the wire-worm and grub. The former of these depredators had appeared in prodigious numbers—something less than a bushel per square rod of land, and their ravages were great. He ascertained by observation that they did not descend deep into the soil at the usual time of ploughing sward land for corn, but continued mostly among the roots of the grass. His object, therefore, was to bury them alive. This he accomplished by turning over the sod with a powerful team, to a depth of at least eight inches, the soil being rather heavy. The surface was then pressed down evenly and firmly with a heavy roller. By this process several inches of compact soil lay above the region of the wire-worms, and as a consequence, whenever they attempted to pass upwards to the surface, they met with too formidable a resistance to penetrate. Hence, they continued with the grass below, and perished with its decay. Whether this be the true explanation or not, one thing was certain,—that where the corn was formerly almost wholly destroyed, it is now full and even in the rows, without the usual numerous vacant spaces over the field, always existing under the old practice.

By a similar process of observation, he was enabled to destroy the grubs. He discovered that these depredators, instead of remaining at the surface, like the wire-worm, descend deeply, and hence that deep ploughing brings nearly all of them to the surface. Hence by the use of a heavy roller, many of them were crushed, and the remainder immovably compressed in the solid earth, till a fine toothed harrow passing over the surface, tore out and destroyed them. The utility of this practice, like that of the former, has been amply proved by successful experiment.

Another practice of the same farmer, though not new, is worthy of notice. He has been enabled to keep his flock of sheep of the very finest animals only, by always doing his own picking for sales, instead of leaving this to the purchaser, as is too frequently the case. Or, at any rate, no sheep buyer is permitted to select from his flock, unless he is willing to pay fifteen or twenty dollars per head, which, of course, he will not do. A perseverance in this course for a long series of years has so improved his sheep, that though originally nothing uncommon, they will now compare creditably with many of the very finest in market.—*Cultivator.*

For the Farmers' Cabinet.

Culture of the Grape.

For many years we have thought the cultivation of the grape, both for table use and the manufacture of wine, might and ought to be increased an hundred fold.

It may not be known to all your readers that Europe is not naturally a grape growing country. All the vines in the first instance, having been brought from Asia;—and yet France alone, produces annually twelve thousand millions of pounds of grapes, giving employment to several millions of the French population.

The citizens of Paris alone consume ten millions of pounds of grapes annually for the table; a quantity probably much larger than all that is raised in the United States: and yet the grape is indigenous in our country, growing spontaneously in every State and territory in the Union. It is true some of our varieties are small, sour, and of little value, but we have many kinds that are excellent both for table use and for wine. The Isabella, although originally from the South, is perfectly hardy in the middle and eastern States, and thrives well in all parts of the Union, except in the vicinity of Cincinnati and some parts of North Carolina. As an abundant bearer, either in the garden or the vineyard, producing a delicious and wholesome fruit, it is unsurpassed in this or any other country. It also produces an excellent wine, equal to the best pure Lisbon.

The Catawba is considered by many persons a richer and finer grape for table use, than the Isabella. At Cincinnati it is the favourite for producing a rich wine, similar to the finest Hock wine of Europe. Champaign has also been made from the Catawba, which readily sold at Cincinnati at $15 per dozen bottles. It is a fine bearer and thrives well as far north as Croton Point, on the North River, forty miles above the city of New York. It is not quite as hardy as the Isabella.

The other favourite grape cultivated at Cincinnati, is there called the "Cape grape;" at Vevay, Indianna, it is called the "Constantia;" at York and Reading, Pa., the "Madeira;" at Philadelphia, the "Alexander;" at Flushing, N. Y., the "Schuylkill Muscadel;" and at some other places, the "Winne grape." It is a constant and abundant bearer, perfectly hardy, and produces wine which is equal to good Madeira.

The *White Scuppernong* has long been celebrated at the South for producing a rich

light coloured wine, similar to fine Hock. A single vine has often produced one hundred and fifty gallons of pure wine in a season. It is not sufficiently hardy for the eastern or middle States.

The four varieties above named, are the most celebrated for wine.

Elsinborough, Longworth's *Ohio*, Norton's *Virginia Seedling*, Weller's *Halifax Lenoir*, *Vine Arbour*, *Hansteretto*, *Missouri*, and *Herbemont*, are fine table varieties, but so far have not proved so valuable for wine as the four kinds first named.

Until within a few years, it was considered a settled point, that wine could not be made in this country without the addition of sugar or alcohol. There was never a more egregious error; and the first to teach us in this matter, were the German vinedressers, when they commenced the vineyard culture in this country. Now at Cincinnati,—the vicinity of Reading, Pa.,—and in other principal vine growing districts, neither sugar nor alcohol is used; and the wine is in higher repute than ever, and commands a better price.

At the Hermitage vineyards in France, the annual average vintage is from 210 to 260 gallons per acre. At Cincinnati, the average is from 450 to 500 gallons per acre.

In France the average price of lands is $200 per acre. In this country the average price would not amount to $50 per acre. It is true, that once in a few years the crop of grapes fails; but this is the case with all crops. This failure happens oftener in France than in this country; but notwithstanding this and the high price of land in France, the cultivation of the grape is the most profitable culture in the kingdom, and the hands are better paid for this, than for any other agricultural employment.

Our American wines have to be sold at lower prices than foreign wines of the same quality, in order to introduce them. Catawba, one year old, now sells at Cincinnati at about one dollar and fifty cents per gallon. In bottles, the usual retail price is from forty to fifty cents per bottle. Last season an analysis of Catawba wine and some of the best Hockheimer of Europe, was made by Dr. W. B. Chapman, one of the first chemists of Cincinnati, which proved that our Catawba was the purest and richest wine.

In 1845, 23,219 gallons of wine were made in Hamilton county, Ohio. Many of the vineyards being young, bore for the first time, and more than half of the crop was cut off by the frost and rot—a failure that may not happen again for ten years.

William Rasor, near Cincinnati, has a vineyard of one acre—it came into bearing in 1837, and for nine years produced an average annual yield of four hundred and seventy-seven gallons of pure wine, and at an average annual expense not exceeding one hundred dollars.

B. G. Boswell,
230 *Pine st., Phil'a.*

Dec. 22nd, 1846.

British Association.

The following extract is given from the proceedings of the Sixteenth Meeting of the British Association.

"Professor Daubeny communicated a paper 'On the Rationale of certain Practices employed in Agriculture,' specifying amongst the rest the use of quicklime and of gypsum as fertilizers to the land. The former of these substances he supposes to act in part, by rendering those inorganic substances which are present in the soil more soluble, or—in accordance with the views laid down by the author in a memoir which he has published in the Philosophical Transactions of last year—by converting the *dormant* constituents of the soil into active ones, or into a state in which they become immediately available. He appealed to the authority of Professor Fuchs, confirmed by that of Mr. Prideaux, of Plymouth, as showing that the alkali may be extracted from granite readily by water, after the rock in a pounded form has been heated, together with quicklime; and he stated that a soil exhausted by long-continued cropping, was found by himself to yield to water twice as much alkali, after having been mixed with quicklime, as it had done before. Hence the frequent application of lime tends to produce exhaustion in the land;—not only because it supplies in itself no fresh alkali, but likewise because, by rendering that which the soil contains more soluble, it causes it to be washed away more readily by atmospheric water. Ploughing, and other mechanical methods of pulverizing the soil, appear to act in the same way; and so, also, may we suppose to do the sprinkling of the soil with sulphuric acid, as is practised in some parts of the continent. The author then alluded to the various modes of explaining the advantage attributed to gypsum, which certain leading agricultural chemists had proposed: one ascribing its virtues to the direct influence of the salt; another to the indirect good resulting from it, owing to its property of fixing ammonia; a third, regarding its acid constituent as of the principal utility, and a fourth, its base. Dr. Daubeny gave reasons for rejecting the third and fourth of these hypothesis; but considered that the use of gypsum may be in

part attributable to the first, and in part to the second, of the causes pointed out. He supposes that this substance is generally useful to all plants, from its property of fixing ammonia; and also especially serviceable to certain species, by supplying them with a salt which they require for their development. He was principally anxious, however, to bring forward this subject, in the hope of inducing chemists to institute such experiments for the purpose of setting the question at rest.

A long discussion followed;—several agricultural gentlemen remarking on the effects of carbonate of lime on wheat crops, and on the resulting weakness of the straw, owing to a deficiency of the silicate of potash necessary for the formation of the supporting epidermis of the grass. Some specimens of the disease in turnips, commonly called fingers-and-toes, were exhibited; and it was stated that the superphosphate of lime was a remedy for that disease. The Bishop of Norwich, however, remarked that the cause assigned for this disease was not that to which he believed it must be attributed. The flow of the sap was checked by the action of an insect, and then an abnormal condition developed. This year, in many parts of the country, this and similar diseases were very prevalent; and the reverend prelate was disposed to regard the existence so abundantly of this insect as in some way connected with the electrical condition of the atmosphere during the exceedingly hot weather which has prevailed—producing with extreme rapidity the decomposition of animal and vegetable matter. Dr. Faraday made a few remarks on our general ignorance of the chemistry of vegetable life, and on the importance of such meetings as the present, where the chemist and the agriculturist might meet and compare results. Since the days of Davy the science of agriculture has considerably advanced; but all that he heard convinced him of the fact, that we were only standing on the very threshold of an inquiry which would eventually, now that attention was so generally turned to the subject, advance our knowledge in an extraordinary degree.

Professor Grove spoke of the decomposition of water into its constituent gases by heat, and in the first place, called attention to the fact, proved by Cavendish and the French philosophers, that oxygen and hydrogen being exposed to a high temperature, or the electric spark, immediately combined to form water. He then announced his discovery that all the processes by which water may be formed are capable of decomposing water.

A description of 'the Fairy-rings of Pastures,' with which most persons are familiar, was given by Professor J. T. Wray; and it was stated that the grass of which such rings are formed, is always the first to vegetate in the spring, and keeps the lead of the ordinary grass of the pastures till the period of cutting. If the grass of these fairy-rings be examined in the spring and early summer, it will be found to conceal a number of agarics, or 'toad stools,' of various sizes. They are found situated either entirely on the outside of the ring, or on the outer border of the grass which composes it. Decandolle's theory, that these rings increased by the excretions of these fungi being favourable for the growth of grass, but injurious to their own subsequent development on the same spot;—was remarked on, and shown to be insufficient to explain the phenomena.

The author's view of the formation of these rings, is as follows: A fungus is developed on a single spot of ground—sheds its seed, and dies: on the spot where it grew it leaves a valuable manuring of phosphoric acid and alkalies—some magnesia and a little sulphate of lime. Another fungus might undoubtedly grow on the same spot again; but upon the death of the first, the ground becomes occupied by a vigorous crop of grass rising like a phœnix on the ashes of its predecessor. It would thus appear that the increase of these fairy-rings is due to the large quantity of phosphated alkali, magnesia, &c., secreted by these fungi; and whilst they are extending themselves in search of the additional food which they require, they leave, on decaying, a most abundant crop of nutriment for the grass."

For the Farmers' Cabinet.

Landlord and Tenant.

To the Editor,—In the last number of the Cabinet, page 164, under the head, *An Important Decision*, the statement of a case is given, involving the question, whether *in the absence of an agreement* on the subject, a landlord is entitled to retain on land leased by him, the *straw* of the crop raised during the tenancy, so that it may be consumed on the land, or whether the straw belongs to the tenant absolutely, so that he may remove it from the land and dispose of it as he pleases.

According to the report of the decision of Judge Lewis of Lancaster, the landlord's right was sustained. Near the close of the extract from Judge Lewis' opinion, he alludes to the case of *Craig* vs. *Dale*, ruled in the Supreme Court of our State, and which is in direct opposition to his opinion,

and says that he believes the decision in *Craig* vs. *Dale*, will *not* be adhered to.

Now it so happens that the Supreme Court had at that very time *re-affirmed* the doctrine of *Craig* vs. *Dale*. This was done in *Iddings* vs. *Nagle*, 2 Watts and Sergeant's Reports, page 22. *Craig* vs. *Dale*, is reported in 1 Watts and Sergeant, 509.

After *two concurrent* decisions of the highest court of judicature upon the same point, is it reasonable to regard the law on that subject as *unsettled?*

I have made this communication to you *very hastily*, from the apprehension that a reliance on the opinion of Judge Lewis—a Judge of a Court of Common Pleas, whose decisions are liable to review by the Supreme Court—might lead some worthy farmers into litigation, which must end in defeat.

In conclusion I transcribe the syllabus of the respective decisions of the Supreme Court above alluded to.

"The way-going crop to which a tenant is entitled upon his leaving demised premises, *includes* as well the *straw* as the grain, which he may remove and dispose of as he pleases, being subject only to the terms of his contract, and not to any supposed custom of the country on that subject."—*Craig* vs. *Dale*.

"A lease between a landlord and tenant is to be construed by those rules which govern the construction of contracts, and not by the custom of the country. A *tenant is entitled to the straw which grew upon the land, or not*, as his CONTRACT PROVIDES."—*Iddings* vs. *Nagle*. G. M. S.

December 23rd, 1846.

Wages of Labour.

From an instructive article on the subject of agricultural labour in different countries, its wages, and the comparative condition of the labourer, in the London Mark Lane Express, we condense the following facts: In our estimates we have called the shilling sterling 22 cents, though its value is a trifle less; and the comparison, though instituted with the English labourer, can be easily made with those of this country.

In England, the average rate of agricultural wages for an able man, with a family, is nine shillings, or $1 98, per week. From this is to be deducted cottage rent, at 35 cents per week, leaving $1 63 per week, to provide himself with the necessaries of life. In France, a labourer in the same situation receives $1 04 per week; in Prussia, 66 cents; in Germany, $1 02 per week; in Holland and Belgium, $1 20; in Italy and the Austrian States, $1 15. It will be remembered that these averages are those of the common labourer—shepherds, carmen, and mechanics, receiving rather more. The food which the wages named above will purchase in the several countries, is stated in the "Express" as follows:

In England the labourer can obtain for his 163 cents, or his week's wages, either 39 lbs. of bread, or 11½ lbs. of meat, 7¼ lbs. of butter, 12¾ lbs. of cheese, or 174 lbs. of potatoes.

In France, with his 104 cents, he can buy either 46 lbs. of bread, 13½ lbs. of meat, or 261 lbs. of potatoes.

In Prussia, with his 66 cents per week, the labourer can buy either 36 lbs. of bread, 16 lbs. of meat, or 8¾ lbs. of butter.

In Germany, with 102 cents he obtains either 43½ lbs. of bread, 18 lbs. of meat, 11½ lbs. of butter, 24 lbs. of cheese, or 54 quarts of beer.

In Holland and Belgium, 120 cents will buy either 58 lbs. of bread, 22 lbs. of beef, or 460 lbs. of potatoes.

In Italy and the Austrian States, the labourer, with his 115 cents, can buy either 50 lbs. of bread, 22 lbs. of beef, 8 lbs. of butter, 8 lbs. of cheese, or 168 lbs. of potatoes.

This table is interesting, as showing not only the prices of labour in the countries named, but also the price of bread, meat, butter, cheese, &c. It is true, the bread is stated by the pound instead of grain by the bushel; but as the flour of a bushel of wheat, say 40 lbs., will make from 63 to 65 lbs. of bread, an estimate may easily be made of the quantity of wheat or flour a man in any of the countries named would receive for a week's work. The labourer in this country, who receives his bushel of wheat a day, or other articles in proportion, will readily conceive the meagre fare, and slender chance of "laying by anything," which must attend the foreign agricultural labourer. In all these countries it will be seen the value of provisions is at least as great as here, and in some instances much greater. It is only by the comparisons which such authentic statements enable them to make, that the free labourers, the farmers or mechanics of this country, can fully appreciate the advantages of their position.—*Cultivator*.

The principal distinction between animal and vegetable products, is the presence in the one case, and the absence in the other, of nitrogen. Many animal secretions, however, such as the fatty oils, are destitute of nitrogen, and many vegetable products, such as gluten and the organic alkalies, contain it.

Manures.

By repeated cropping, the best soils become exhausted of their fertile properties, while naturally indifferent soils require the administration of certain qualities, before they will yield a due return to the labours of the husbandman. There are, no doubt, soils so naturally rich in some parts of the world, that, though used for twenty or more years in growing successive grain crops, they show no indications of impoverishment; yet even these must in time be exhausted, and therefore, in all circumstances, manures, or artificial fertilizers, require the consideration of the husbandman. In our own country they are of the first importance.

Manures are of two classes, both of which have distinctive characters, and perform different offices in the economy of vegetation. The first of these comprehends all animal and vegetable decomposing matter, and is principally employed in feeding the plant, augmenting its size, and sustaining the vital energy. The second operates more on the soil and decomposing matter than in directly contributing to the support of the vegetable. The first kind has been called animal and vegetable, and the second fossil, manures. Under this second class are ranked not only lime, marl, and gypsum, but sand, gravel, and clay, so that all the meliorations which are effected on soil by blending and compounding the original earths, are compressed within its limits.

The animal and vegetable manures, which are putrescent in their nature, are foremost in importance and dignity. They consist of certain elementary parts of animal and vegetable substances, elaborated by a natural chemical process in the course of the decomposition or decay of the bodies. The excrementitious matter, or dung of all animals, is no other than the remains of the vegetable or animal food which has been received into the stomach, undergone there a partial dissolution, and been thrown out as unserviceable for the further nutrition of the system. From this universal decay of organized matter, and its conversion into fluids and gases, it would seem that animal and vegetable substances, and excrementitious matter, are resolvable into each other, and are only different parts of the same original principles. The essential elements of them all are hydrogen, carbon, and oxygen, either alone, or in some cases united with nitrogen. Conveyed by liquids or moist substances into the ground, these elements are sought for as nourishment by the roots of plants, and so form the constituent principles of a new vegetation. Inasmuch as flesh consists of a greater concentration of these original elements than vegetables, the manure produced by carnivorous animals—man included—is always more strong in proportion to its bulk than that discharged by animals who live only on herbage. Experience fully proves that all animal and vegetable manures are but varieties of one kind of principles; their actual shape and appearance being of much less consequence than the degrees of strength in which these principles reside in them.

Whatever be the value of the elementary principles of manures, practically they are of no use as manure till they are disengaged by putrefaction. It may be further observed, that putrefaction is in every instance produced by the elementary principles being set at liberty either in a fluid or volatile state. If a quantity of stable dung be piled into a heap, and freely exposed to all varieties of weather, it soon heats and emits a stream of vapour, which is often visible as a cloud over it. These vapours, and also the odours sent forth, are gases escaping, and the heap is constantly diminishing in weight and volume; at the end of six months, if there have been alternate moisture and warmth, not above a fourth of the original essential material remains to be spread on the field; there may be in appearance nearly as much substance, but it is comparatively of little value—the real manure is gone, and what remains is little better than a mass of unputrefied rubbish.

It may be safely averred, that no principle connected with agriculture is so little understood or thought of as that which has been now mentioned. We therefore crave the most earnest attention to it by every reader of these pages. Generally speaking, the excrementitious matters thrown to the dung-hill are treated with perfect indifference as to the effects of exposure and drainage away in the form of liquids. It cannot be too strongly stated that this is a gross abuse in farming. The putrescent stream contains the very essence of the manure, and should either be scrupulously confined within the limits of the dunghill, or conveyed to fresh vegetable or earthy matter, that it may impart its nutritive qualities.

A knowledge of this important truth has led to the practice of making compost dung-heaps, in which the valuable liquids and gases of different kinds of manure are absorbed by earth, or some other substance, and the whole brought into the condition of an active manure for the fields. Hitherto it has been customary to speak of dunghills, but there ought to be no such objects. The collection of manure from a farm-yard and offices should form a dung-*pit*, not a dung-

hill; and the manner of making and managing the contents of this pit on the best principles is well worthy of our consideration.

The situation of the dung-pit should be near the stables and cow-houses, and placed so low that all streams of urine from them should flow at once into it, so that nothing be lost. It may be three or four feet deep, and of a size proportionate to the stock of cattle usually kept by the farmer. It is not necessary that it should be built round with a wall, or have a perpendicular descent, as it may slope gently inwards, and deepen gradually towards the centre. It should, if possible, be covered by a roof, to prevent the action of the sun. If the bottom be found firm, impervious, and capable of containing the juices, no further trouble is requisite, and the work is complete; in many instances, however, it will be necessary first to puddle with clay, and then line the bottom with flag-stones. Into this pit, earth, with refuse straw, should be brought and strewed over the bottom and sloping sides, to the thickness of nine to twelve inches, and this will form an inferior layer to absorb all that portion of the liquid manure which naturally runs to the bottom. The pit is now prepared to receive all kinds of animal and vegetable manure, which, when brought, should be always laid evenly over the surface. In Scotland, such dung-pits are common, and in the course of accumulation, a young or wintering stock of cattle is allowed to go at large upon the whole; the animals being at the same time fed on a proper allowance of straw. Care is also taken to mix, in laying on, the dung brought from the cow-house, stable, and piggeries, so that the rich excrement of the well-fed animals may be incorporated with that of a poor description from others. It is likewise of the utmost importance, though too frequently neglected, to convey to the pit the entire liquid refuse of the farm-yard, provided the quantity be not so great as to make it advisable to have a separate pit for its reception.

It is customary to cart away the material of the dung-pit at convenient opportunities—usually during the frosts in winter—to a place in the fields, near where it is to be used, and there pile it up in a quadrangular heap of about four feet in height. Dung carted out in this manner, is ready for the turnip husbandry in June, and the practice is otherwise convenient. It may, however, be stated, that for want of attention to principles already explained, such dung-heaps, by exposure for months to the weather, must lose some of their valuable properties. In every instance, the dung-heap in the fields should be placed in a hollow situation, with a substratum of earth, and should have a scattering of a few inches of earth over it, and around the sides, to keep in the volatile gases. When the dung-pit has been thus emptied, it may again be progressively filled as before; and when it is carted out in any of the spring months, it will be found necessary to turn it once, or oftener, for the purpose of accelerating the decomposition of the strawy part of the mass. It may be of use to know, however, that the dung required for fallows for wheat in autum, may be less putrefied than that for turnip crops.

The urine of cattle is of great value as a manure, and this is so well known to the farmers of Belgium, that they use tanks for collecting the liquid from the cow-houses, and thence they pump it up, and pour it over the land at the proper season. When mixed with vegetable refuse, moss, or earth, it forms an excellent compost. It is deeply to be regretted that so little is known on this subject; and such is the carelessness of farmers and cottagers, that the urine from their cattle-stalls is in most cases suffered to go completely to waste. The value of night soil and human urine as manures is equally great, but both are much neglected in British agriculture. Without entering minutely into details on this point, it may be stated, that the offensive odour of all excrementitious matter may be neutralized by an intermixture of gypsum, or lime and earth, and in this state be used as most valuable manure. Bone-dust is now used as a highly nutritious manure on light soils; and it is reckoned that 100 bushels are equal to forty cart-loads of farm-yard manure. Common sea salt, when judiciously administered in moderate quantities on arable land at the time of fallowing, has been found of great value for its manuring and cleaning properties. It promotes fertility, is a remedy against smut and rust, preserves the seed from vermin, and is particularly useful in increasing the produce of grass lands.—*Chambers's Information for the People.*

Answers to the Queries of the State Agricultural Society of S. Carolina.

We have not seen the queries to which the following communication of our intelligent neighbour and excellent farmer, M. L., refers;—we copy from the *South Carolina Temperance Advocate*.—Ed.

The questions propounded on agriculture by the "State Agricultural Society of South Carolina," indicate an accurate perception of the points requiring investigation, and would, consequently, require a degree of

scientific knowledge in reply, to which few can pretend.

To the queries, regarding matters of fact, there will be no difficulty in making a reply, though it must be borne in mind, that in a State, presenting so vast an agricultural surface as Pennsylvania, much diversity of practice as well as theory, must prevail.

Dry statistical details, which can be obtained from published documents, it will not be advisable to refer to, except for occasional illustration: for if I rightly appreciate the tenor of several of the questions, the information required can be afforded by a practical man of observation and experience.

It is only in this connection that my locality or identity can interest the parties who require the information; but the distance to Philadelphia being only twelve miles, it will, of course, be understood that my observations more especially refer to Eastern Pennsylvania.

There are some vestiges yet remaining, to prove that this was a favourite agricultural region of the native Indians; and I have seen clearings in the extensive woodlands of the Moravians, fifty miles north of Philadelphia, which were known to have been Indian corn-fields. That these tribes did not raise sufficient for their sustenance, is proved by the thousands of tons of oyster shells on the inlets of Chesapeake Bay, and the perfectly straight Indian path leading from this region to that; which is yet distinctly perceptible in the remnant of primeval forest on the route. When this region was first settled by the Swedes and Dutch, they chose, for obvious reasons, locations on or near navigable waters. But when William Penn parcelled out the country among his followers, many of the original colonists were from Wales, and the hilly districts of the West and North of England. They were rather accustomed to pasturage, than a strictly agricultural people; and in consequence they settled on hilly ground, well watered by springs, passing over the primitive limestone valley, which is now the garden of the country, because it was heavily timbered and not so well watered. Most of these settlers were Friends or Quakers, and notwithstanding the abolition of the laws of primogeniture, many of the descendants of these old families yet remain in possession of the estates bequeathed from an antiquity remote for the United States.

It is to this people we are chiefly indebted for the hereditary reputation and superior quality of the Philadelphia butter, the flavor of which is also due to the very ancient pastures, well set with green grass and white clover—*Poa Pratensis* and *Trifolium Repens*—*Poa Pratensis* or smooth stalked meadow grass, is identical with the famous Kentucky blue grass; the writer having had seed sent him from Kentucky, and verified this fact, which was before discovered by Dr. Darlington, of Westchester. Many other species contribute to the luxuriance of these old green fields; especially the sweet vernal grass,—*Anthoxanthum Odoratum*,—which is highly aromatic, and according to respectable authority, is itself the primary cause of the excellence of the butter. Land in permanent grass, from the cheapness with which it can be kept up, requiring only at long intervals a top-dressing of lime and plaster, may be considered as in a condition more profitable, than under any description of tillage performed by hired labour. The more ancient the sod of grass, the better is it relished by the cattle, and the more productive is it in milk and butter; resembling, in this respect, the pastures of Devonshire, where fields which have been but twenty-five years in grass, are not considered equal to those which have remained unbroken for fifty or one hundred years. It is but fair to state, that though the writer, under certain limitations of distance from market, considers the views laid down as undoubtedly correct, yet many intelligent agriculturists, justly appreciating the value of the crop of Indian corn, are in the habit of breaking up their old grass fields in rotation, and planting them with corn. The approved method is, to follow this crop with oats the ensuing spring—then to manure heavily, plough three times, and sow with wheat and grass seed in the fall, followed by red clover seed in the spring. The course of rotation varies, according to the division of farm land, from five to eight, or even ten years.

Indian Corn.—The average crop of Indian corn in well improved and naturally fertile soils, may be set down at 50 bushels per acre, and if stimulated by the application of lime, plaster, ashes, or manure to the hill, 75 bushels per acre may occasionally be obtained. Taking this whole region, however, 30 bushels per acre may be considered nearer the true average, under the actual system now pursued. Much diversity prevails also in regard to the particular description of Indian corn—*Zea Mays*—which is cultivated, varying in fact from the small yellow Flint corn of Canada, which ripens in three months, to the large dog-tooth Southern corn, which in this latitude will scarcely ripen in six months. The writer has experimented upon corn from Tennessee, South Carolina, Maryland, Canada, China, the Baden corn, and other varieties, without a "local habitation or a name."

This experiment answered a double purpose. 1st. It afforded him an opportunity to furnish the agent of a German Agricultural Society with a great variety for transmission to that country, as samples; and 2ndly, induced him to settle upon the old Pennsylvania Yellow eight-rowed Flint corn, which has been cultivated in Montgomery county, Pa., for a period of a century, and was very probably the corn of the Aborigines, as it is found that every description of yellow corn has a tendency to identify itself with this variety, after a few years cultivation. Many do not consider it so productive as the Gourd Seed corn, but I have raised 65 bushels per acre on large fields, and it will command 10 per cent. more in price than the Gourd Seed. The Philadelphia Agricultural Society awarded a premium for a sample of this corn at their late exhibition. It is particularly adapted to feeding cattle, after having been ground with the cob, which, from its small size and texture, and extreme hardness, amalgamates perfectly with the corn, and makes handsome meal, almost as much prized as meal from corn and oats mixed. We usually plant four grains to the hill, and it has a tendency to produce two, and even three or four ears to the stalk, and in very productive seasons, sprouts only twelve or eighteen inches high, are frequently crowned with a small ear. I always plant from stalks that produce two to four ears each. On the whole, therefore, I prefer this corn, viewing it in every economical light. Its productiveness, its adaptation to every variety of soil, its acknowledged superiority for meal and bread, and in fact for every thing but hominy, in which capacity I have not seen it tried. It is admitted that Indian corn, in such varieties as were adapted to the great diversity of climate, existed in almost every part of the American continent on its first discovery. But much ingenious speculation has been resorted to, to prove that it was not known in the Old World previous to the discovery of America. Recent travels in Central Asia, however, with the facts previously known, seem to incline the more mature opinion of enquirers to admit the existence of "*Zea Mays*" in some parts of Asia, from a remote epoch.

Oats.—The oat crop, which succeeds Indian corn, possesses many and important claims upon the good opinion of the farmer, though not used in this country as in the North of Britain, as the food of man; and in the Southern part of Pennsylvania, degenerating in weight and value from the high temperature of the climate, yet as food for horses, it is unsurpassed. Not possessing the nutritive properties of corn, it has not its heating and feverish tendencies, and is especially valuable as food for horses on a journey. It succeeds well on land rather cold and wet, and perhaps the best oats produced in Pennsylvania, grow upon the table lands of the Alleghany mountains. It is indeed from these more inclement and cold regions, that we are forced to procure a renewal of our seed. It is sown roughly, —three bushels to the acre—after a single ploughing, in the month of April, and is harrowed in; it is rolled occasionally, after being up two or three inches. This crop has the valuable property by its rapid growth of overshadowing and discouraging the growth of weeds, and consequently leaves the ground in an admirably clean condition for the wheat and grass crops which follow it. The straw of oats is much esteemed as winter fodder, and used with the blades of corn and a small proportion of hay, will carry cattle in good condition through the winter.

As high as 60 bushels of oats have been obtained per acre, though 25 to 30 bushels may be considered a fair crop. The writer this season had about 40 bushels per acre of very heavy oats, say 36 lbs. to the bushel. There are several varieties of oats cultivated, called by various local names, as Barley oats, the seed of which I have bought at $2 per bushel, but found it to degenerate. The Black oats, a heavy good grain, and the one-sided or Tartarian oats.

Wheat.—There can be no doubt that we owe the various descriptions of wheat to the varieties of soil and climate in which it is cultivated; and it is in vain for the agriculturist to attempt to force nature. The wisest course for him to pursue, is to adapt the crop skilfully to the soil, climate, and geological formation in which it may be his lot to sojourn. After experimenting with the beautiful white Genesee and beardless wheats of several kinds, and especially with some magnificent grains of wheat, brought from the vicinity of the ancient Jerusalem, all either were destroyed by the ordinary enemies of the wheat, viz.: fly or mildew, or exhibited a decided tendency to be resolved, or at least approximate to the old Pennsylvania Red Chaff bearded wheat, a sound good grain, producing rich flour, but not commanding the highest price in the market. This change is especially observable, in respect to the Mediterranean wheat, which about ten years ago, when introduced among us, was a coarse, flinty grain, more nearly resembling rye than wheat. Its value consisted in an exemption from the ravages of the Hessian fly and mildew, so that it almost entirely superseded every other de-

cription of wheat. Every year, while improving in quality, it is losing its exemption from the assaults of the enemies of the wheat, so that it is evident that in a few years its peculiarities will disappear, and we shall have only the old Red Chaff bearded wheat again.

There has not been an unexceptionable wheat year since 1835, when the crop averaged 40 bushels per acre, on lands that have rarely reached 30 bushels since, and generally not more than 25 bushels per acre. The approved system, when it is intended to lay down oats stubble to wheat and grass, is to plough three times, and harrow as often. The accumulated manure of the year is spread, after the first ploughing, at the rate of twenty large ox-cart loads to the acre, which is ploughed under and suffered to lay until it is nearly time to seed the land, when it is again ploughed, and the sowing at the rate of two bushels to the acre, is then performed. After the grain is harrowed in once, grass seed, mostly Timothy—*Phleum Pratense*—at the rate of eight quarts to the acre, should be sown and lightly harrowed once. The seeding is finished by sowing red clover,—*Trifolium Pratense*—in February or March, at the rate of six quarts to the acre. This being a biennial, leaves the sod at the end of two years, in exclusive possession of the Timothy, which is considered so valuable for horses, that it not unfrequently brings $20 per ton in Philadelphia.

Rye.—Rye is sometimes introduced in the system of rotation, either as a substitute for wheat, or more usually as an independent element in the course succeeding the crop of wheat, and being followed by grass, as above described. The straw of rye is considered the most valuable of any for manure and the various purposes of the farm, as thatching, making bands for bundles of corn fodder, &c. Rye, of admirable quality, is produced in the more Northern and hilly regions of Pennsylvania, but it is observed speedily to degenerate in the Southern part of that State. This grain, for several years, has not been productive, and the cultivation in this vicinity is on the decrease. Fifteen or twenty bushels per acre may be the average yield, and its cultivation is chiefly confined to lands of second quality.

Buckwheat.—This grain is extensively cultivated in Pennsylvania, and is frequently as low as fifty or sixty cents per bushel. The straw is of very inferior value for the production of manure, and its cultivation is chiefly confined to lands recently cleared, as it is an excellent tamer of wild lands, or to those of inferior quality.

Barley.—This grain is not extensively cultivated in our State, and is being gradually superseded by other more highly esteemed crops.

Potatoes.—This most important crop has been failing gradually for several years, and in my apprehension exhibited a gradual deterioration in constitutional stamina, long before it was overtaken by the fatal rot, which is now producing such disastrous consequences in the Old World. The importance of agriculture, in the eyes of statesmen, has never been more strongly developed than now, when kingdoms are convulsed, and empires may be overthrown by the failure of a single esculent. This, like some great convulsion of nature, may be the means of ultimate benefit, as the whole energy of science is now employed to discover a remedy for this fatal disease; though hitherto, unfortunately, without success, and what is more discouraging, exhibiting by disagreement a total failure of fixed principles. My own opinion is, that we shall have to renew our seed from the Andes, or wherever the root can be found in a state of nature, as I apprehend that by propagating almost exclusively from tubers for so long a period, a diminution of vigor has gradually taken place, which is but partially remedied by reproducing from the seeds of these enervated plants. Long before any public notice had been taken of the failure of this crop, I had almost ceased to attempt its cultivation, even from sets recently produced from the seed, because of a partial failure of the crop, very perceptible in the premature death of the vines, which instead of continuing green until late in September, frequently died in July or August. It may, I think, be laid down as a principle, that any plant propagated only from shoots or layers for a long period, that is capable of reproduction from the seed, will exhibit a tendency to deterioration, or in farmers' phrase, "run out."

This crop has not been, however, much worse this season than last—and I have found by cutting off the tops, and allowing the root to remain in the earth up to November, we got a better article than by early digging and exposure to the air. Those infected, die in the earth, and leave only a mass of corrupt matter, which may amount in some cases to twenty-five or fifty per cent. of the whole crop. Low, moist grounds are much more liable to blight, than high, dry light soils; and I know of an instance on the latter description of land, where a very large and healthy crop has been produced this season, by using horse stable manure, very pure from the city. Two hundred bushels to the acre, are considered a very

large crop with us, and of late less than one hundred bushels come nearer the mark.

Manures.—It is only of late years that science has discovered and partially applied, the animal and vegetable refuse of the manufactures to the use of the farmer. A commencement has now been fairly made, and the glue-boilers, tobacco manufacturers, colour manufacturers, sugar refiners, wool combers, skin dressers, button makers, and numerous other tradesmen, are made to contribute to the fertility of the soil, what but recently was a public nuisance. Poudrette, also guano and bone dust, are coming into extensive use. All this, added to our plaster and lime, with the ordinary manures of the barn-yard, certainly give ground to hope for great ultimate benefits. All these manures and stimulants I have seen applied with manifest, but various advantage. My own experience has been rather in favour of a compost or marsh mud, with plaster, lime, and stable manure. Bone dust has not, on our heavy rich soils, produced anything like the effect described in England, and the consequence is, that bone gatherers are constantly travelling far into the interior collecting bones, which are ground in Philadelphia, and shipped in great quantity to that country. He who uses or consumes upon his own land, the straw and hay of his fields, selling only a proportion of his grains and fat cattle, may keep his land in an improving condition, especially with the aid of those invaluable stimulants, lime and plaster, and need look no further for manures.

This process of returning to the land the culm or straw it has produced, is recuperative, and is a wise provision of nature, without which all lands would have a rapid tendency to sterility.

Rotation of crops.—A judicious rotation will, of course, have reference to the particular article of produce of the greatest value in each district;—as a general rule, in all wheat lands, this will be wheat.

Some years ago, on an agricultural tour in the interior, about fifty miles, I heard of a German, who had introduced an improved system of cultivation, then generally adopted in that region. On visiting this man, Jacob Sheimer, of Northampton county, Pa., I found him a plain, practical old farmer, who in about thirty-five years, on a farm of 100 acres, with two hands, had realized about four times its value of $80 per acre, besides raising and educating a family.

His process was as follows—his great object being wheat—having originally divided his farm into eight fields, of about twelve and a half acres each:—1st. Manure and lime; plough in May, June and August; harrow and seed one and three-quarter bushels of wheat to the acre, which put in with a plough.

2nd. Clover seed, sown on wheat in the spring, six quarts to the acre, and pasture after harvest.

3rd. Plaster the clover in the spring; one bushel to the acre; cut clover in June; plough down second crop, and seed again with wheat.

4th. Wheat—Same treatment as No. 2.

5th. Pasture early in the season. Plough in August, and sow wheat.

6th. Wheat again. 7th. Plough stubble, sow rye, one and a quaster bushels to the acre: sow clover in the spring on rye.

8th. Plough clover sod and plant corn, and next season recommence the system on the fallow ground.

By this system, it will be observed that there were always three fields in with wheat, one in with rye, one with corn, two with grass and one fallow. His crops averaged about 1,400 bushels of wheat, 600 bushels of corn, 300 bushels of rye, and his land, when I saw it, appeared in excellent condition.

Breeds of Cattle, Hogs and Sheep.—Gentlemen in the vicinity of cities, prefer the stately Durham. Practical farmers still continue the native breed, a complete mixture of every race, though of late years the Eastern or Devonshire breed, is received with much favour. My experience is in favour of the last mentioned. The Chester county hogs are a highly improved and almost a perfect breed, and are fast superseding all others. Sheep are yet of the old unimproved sort, though many are crossing with the Southdown and other improved breeds. There are also admirable breeds of heavy farm horses.

Labourers.—These are hired by the year, month and day. Good hands by the year, are worth $125 to $150. Monthly hands for the summer, are worth $15 per month; and the daily wages during harvest, are about $1; at other times, about 50 cents, all exclusive of board. The German agricultural labourers from the interior, are excellent hands—industrious, trustworthy, and in the line of their business, intelligent. Many of the sons of independent German farmers are willing to hire themselves in the Anglo-American settlements for the purpose of learning the English language.

Agriculture neither asks nor receives aid from the State. There has been a geological survey of the State, at a vast expense, the final report of which is withheld. We have no

regular agricultural survey, though the reports accompanying the census of 1840, convey much information.

Improvements.—In no part of the world perhaps, are more substantial farm buildings to be found than in Pennsylvania. Built chiefly of stone, both barns and houses will last for ages. Many barns are from 100 to 200 feet long, 25 feet high, and 40 feet wide, being in proportion to the size of the farms. It is characteristic of our admirable German population, to build a good barn, and to get rich before erecting a house to correspond.

In fine, though farmers are not growing rich in cash, yet the progress of improvement is most manifest. Handsome, convenient farm buildings and fences—heavy wagons and light carriages, churches and meeting-houses—roads, lined with vehicles, conveying produce to mill or to market; and above all, a contented, well-fed, well-clothed, and happy population, all indicate a degree of prosperity unsurpassed by any other community on the globe.

Morris Longstreth.

Valley-Green, Whitemarsh Township.
Montgomery co., Pa., Nov. 10th, 1846.

Officers of Philadelphia Agricultural Society.

At the annual meeting of the Philadelphia Society for Promoting Agriculture, held at their room, Washington Hall, January 6th, 1847. Kenderton Smith, vice president, in the chair. Present twenty-six members.

The minutes of the last meeting were read and adopted.

A letter was read by A. S. Roberts, informing the meeting that Professor Walter R. Johnson was about to deliver a course of lectures, to commence this evening, in this city, on Chemistry applied to agriculture, horticulture and animal economy. After which, the following resolutions were offered by him, and adopted unanimously:

Resolved, That the Philadelphia Society for Promoting Agriculture have learned, with great pleasure and satisfaction, that Prof. Walter R. Johnson contemplates delivering a course of lectures on Chemistry applied to agriculture, horticulture and animal economy.

Resolved, That in the opinion of this society, Mr. Johnson's course of lectures will be not only interesting to the community, but also highly promotive of the sciences of which he treats, and is worthy of the patronage of this and every association whose object is the advancement of scientific knowledge.

Resolved, That the treasurer be authorized to subscribe for fifteen tickets on behalf of this society.

Resolved, That the foregoing resolutions be published, and that a copy of them be transmitted to Professor Johnson.

A letter written by Mr. John Brooks, of Princeton, Massachusetts, and published in the Monthly Journal of Agriculture, on the subject of Guenon's Treatise on Milch Cows, was read, expressing great confidence in his method of testing their milking properties.

A circular received by the secretary from J. S. Skinner, Esq., enclosing the form of a memorial to the legislatures of the different States, on the subject of obtaining aid for the cause of agriculture from the general government, was read; and, on motion of Dr. A. L. Elwyn, a committee was appointed to obtain signers thereto.

The following amendment to the By-laws of the Society was offered by A. S. Roberts:

Resolved, That no person shall be eligible to the office of president for a longer term than three successive years.

Which, on motion, was amended by substituting two years in place of three, and agreed to.

After which, on motion made and seconded, it was agreed to go into an election for officers to serve the society the ensuing year; when the following named gentlemen were duly elected:

President—Algernon S. Roberts.

Vice Presidents—Kenderton Smith, Dr. A. L. Elwyn.

Recording Secretary—Aaron Clement.

Assistant Recording Secretary—P. R. Freas.

Corresponding Secretary—James Gowen.

Treasurer—George Blight.

Curators—Samuel C. Ford, S. S. Richie.

Librarian—Aaron Clement.

On motion, adjourned.

Extracts from the minutes,

Aaron Clement,
Recording Secretary.

Report on Manure.

On looking over the Transactions of the New Castle County Agricultural Society, for the past year, several parts appeared to the editor highly valuable and of general interest. We are quite apt enough to travel on in the old beaten road, without turning aside to inquire whether or not it be the most direct one to the goal we are aiming at. The following *Report on Manure* may rouse some of us up to thinking, and possibly thence to action, and to a change in some of our modes of management. Without endorsing entirely all the views of the committee, there is no question but we are too apt to think that any spare grass on the farm is lost or wasted, if there be not some kind of stock to eat it up—Ed.

The Committee on Compost and other Manures report, that they have had some experience in collecting and combining dif-

ferent materials for the purpose of making manure, and the results have not produced a conviction favourable to the system as a means of improving the soil. The expense of carting out and mixing the different substances, added to that of removing them to the fields, is a very considerable item; that it will pay the expense your committee are not disposed to doubt, for any plan of manuring, the most awkward and expensive, appears to be better than none.

The late George Simmons owned a farm about five miles from Wilmington: he improved one of his fields by drawing manure from the city, which cost him, delivered, three dollars per cart load, and spread it at the rate of twenty loads to the acre, making sixty dollars for the manure, which was more per acre than his farm would have sold for, yet the increase in the crops justified the expense. The question, therefore, is not whether a certain application of manure is profitable, but whether the expenditure of labour and capital in any particular application of manure, such as making composts in New Castle county, has advantages great enough to recommend it as a preferable means of improving the soil. To this question, your committee answer in the negative; they do not believe that any known plan of making compost has advantages sufficient to recommend it to the farmers of New Castle county as the most profitable means of fertilizing the soil. But we do not wish, by this opinion, to prevent making composts after the plan recommended by John Jones, (whose letter to the committee we subjoin to this report.) Gather up every kind of decomposible refuse, leaves, twigs, scrapings from the wood pile, straw, chaff, old hay and weeds, and, if the expense is trifling, draw sand upon clay, and clay upon sand, but take all direct to the fields and turn it under the sod.

Keeping of stock, which has hitherto been considered the best means of enriching the soil, has, from the results of some well-attested facts, led to the opinion that it is a sure way to impoverish it. Your committee believe that second crop clover, hay, straw, and chaff will make more manure, left upon the land, than when passed through the animals.

William Polk, of Cantwell's Bridge, a strong minded, sensible man, who has obtained a large stock of practical information on this subject, says, he increased his corn crop ten bushels per acre by turning in the second crop clover, over other parts of the field which was mowed for the purpose of obtaining seed.

Your committee believe that the manure of New Castle county is greatly diminished by the burdens of animals, under which the land seems to groan. It is the great object of every prudent man to investigate and inquire into the circumstances that surround him, and accommodate his practice to the most profitable employment of his labour and capital; and the interest of no one is greater than that of the farmer in carrying out this principle.

In the far West, and in the interior of the large States, where land is cheap, and almost inexhaustible in fertility, the raising of animals may be the most profitable course; it is an indirect way of transmitting their heavy crops of grain to a good market; but in New Castle county, where a few cents per bushel will carry their grain to the highest market, a calculation of profit and loss will show a different result. The vegetation consumed in raising the thousands of cattle and hogs in New Castle county, would make double the profit in grain if permitted to die and decompose upon the soil. A yearling calf, not stinted in winter feeding, well sold, will bring as much as it would have done if sold to the butcher at six or eight weeks old. A fat hog will sell for about the sum that the corn he has eaten is worth, so that the vast amount of vegetable matter consumed by those animals is a total loss, a drawback upon the manure heap. Your committee, therefore, suggest the propriety of testing some of those facts in relation to stock impoverishing the soil instead of making composts.

There is a field of eight or nine acres of corn within one and a half miles of Wilmington. Some of the acres have been measured, and found to yield more than ninety bushels of sound corn; it has not been limed, nor received more manure than other land upon the farm, that has never produced over sixty bushels of corn to the acre. It was manured last spring with a dressing of unmanufactured poudrette, a powerful manure it is true; but it is nothing more than is applied every year to much of the land around Wilmington, without any such results. The cause of this extraordinary crop, therefore, must be found in some other quarter than the application of manure drawn upon the soil. This field has not had a hoof pastured upon it for six years; it was mowed every year, and the second crop allowed to die upon the ground. The clover soon worked out and was supplied by a strong, deep sward of green and other grasses.

In grain growing districts, and such, in the opinion of your committee, is New Castle county, most of the inner fences may be dispensed with, which is an item of great

expense in grazing districts; a few acres of low land containing water, (if it can be conveniently found,) may be permanently enclosed for the animals necessary to carry on the farming operations. It is very difficult to remove old customs and habits, and so inveterate is the propensity to follow on in the path of our ancestors, that some people even love an old error better than a new truth; and in the case before us, we are aware that the prejudice is strong and deep against any plan tending to lessen the manure heap in the farm yard. The experiments of Liebig, Johnson and others, have, of late years, given a new spring to investigation into the fertilizing properties of urine and the excrement of animals, all of which we feel no disposition to disprove; we would rather make use of them as an argument in the support of our theory. It must be evident to the most superficial observer, that whatever the animal leaves behind, in the shape of urine and excrement, it carries away with it more fertilizing properties in the shape of beef, pork, tallow and lard; all of which are extracted from the soil.

The prejudice is strong against cropping as a means of impoverishing the soil, and we admit this prejudice to be founded in fact; but we deny it to any thing like the extent that is attributed to it. We believe the real cause is to be found in the droves of all kinds of animals, which, like the locusts of Egypt, "eat up every green thing." The moment the last sheaf of grain is out of the field, the destroyer comes in the shape of hogs, sheep, horses, colts, donkeys, horned cattle, geese, ducks, turkeys, fowls, that come and go when and where they please. If upon an old worn out field a tiny stalk of clover survives the spring frost and summer suns, it is snapped up or trampled down, and its fertilizing root and multiplying seed lost to all future time.

The impression is almost universal that any spare grass upon a farm is lost, if some kind of stock cannot be procured to devour it, which is, as we think, a very great mistake.

This hasty sketch of what we believe to be a mode of manuring land, far preferable to composts, or the accumulation of large heaps of barn-yard manure, manufactured mostly by animals, is respectfully submitted; and if it produces no other effect than investigation and additional facts, that should even prove your committee to have overlooked some counteracting results, they will feel themselves compensated, having full confidence that the surest guide to knowledge in agriculture, as in every thing else, is free investigation, connected with a regular and systematic course of experiments.

Samuel Canby,
Dr. James Couper,
John W. Andrews,
Henry du Pont,
J. R. Brinckle.

The following is the letter from Major Jones, referred to in the above report.—

To the Committee on Compost Manure Heaps:

The subscriber begs leave to state, that on the 9th May last, he put up a compost heap on the Bommer principle *nearly*. That on the 18th, after the heap was set, the thermometer stood at 142° of Fahrenheit, when placed in a hole, made for the purpose, two feet below the top of the heap; that on the 27th, the mushrooms were growing out of the side and top of the heap and that in twenty days from setting, the heap, which was put up of dry wheat straw, would have done very well to haul out, if immediately ploughed under.

The subscriber would respectfully further state, that he set a compost heap on what he considers a much more economical and effective plan than the Bommer, the base of which consisted of a lot of near one hundred acres. The principal ingredient was clover seed, sown after wheat and oats in the spring of 1845, at the rate of about one bushel of seed to five acres, on a good portion of which a light dressing of manure was spread, the autumn following the sowing of the seed; that in the spring of 1846 he gave this lot or compost heap a further dressing of one bushel of plaster to the acre. That during the month of August last he turned this said clover *well under* with a centre draft plough; and to facilitate the complete covering of which, a heavy harrow was used to comb down the grass previous to ploughing; and that during the early part of the present month, (September,) he harrowed this land well with a set of small, light harrows, lengthwise with the ploughing; then sowed with Pennock's drill 88½ bushels of Mediterranean wheat on seventy-five acres, including a part that was an oat stubble. This lot or compost heap had received a dressing of lime about ten years ago, not exceeding about forty bushels of lime to the acre, but has neither been pastured nor mowed the present season. This the subscriber considers the most economical and regular mode of making up, getting out, and spreading a compost, or dressing a field preparatory to sowing wheat, and gives a much better yield of wheat, and much less liable to fall, if of rank growth, than if manured in any other way.

J. Jones.

Best Regulated Farms.

We take the following from the *American Farmer* of this month, and though without a date, we presume it refers to a recent transaction. These reports on the management of farms are highly valuable in various respects; not only showing the degree of success that has attended the enterprise and industry of farmers, but, what is more important still, the means by which success has been obtained. There is one part of the statement which it would be gratifying to have explained. If the soil of C. B. Calvert's farm is naturally so unpromising, and was exhausted by the tobacco culture, and in its natural state incapable of producing any thing, what means did he take to enable him to apply barn-yard manure so bountifully? Did he contrive means to make it on the farm, or did he purchase it in Baltimore or elsewhere.—Ed.

The undersigned, the Committee on best Regulated Farms, appointed in conformity with the rules of the Prince George's Agricultural Society, beg leave to report: That they entered upon the discharge of the duty assigned them, as soon as they were notified by the competitors for the premiums, that their farms and plantations were in order for their investigation.

Walter W. W. Bowie, Richard S. Hill, Charles B. Calvert and Robert Bowie, Esqs., are the gentlemen who presented themselves as competitors, and invited the attention of the committee.

The farm of Charles B. Calvert, Esq., his system, his investments, and the highly gratifying results of the whole combined, challenged the closest attention of the committee, and merit the most profound consideration not only of this society, but of every Agriculturist in the lower counties of Maryland. Mr. Calvert has entirely given up the cultivation of tobacco, and directed his attention exclusively to the conversion of his farm into a grass-growing and dairy farm. In this he has completely succeeded; and this success is the more wonderful when it is borne in mind, that the soil on which this change has been effected is a cold, barren, cadaverous clay, in its natural and broken state producing nothing, defying all well directed efforts of the hoe and plough, and incapable of producing any thing. On this land, gypsum, so powerful and magical in its operation elsewhere, has no effect whatever; nor has any perceptible improvement from heavy applications of lime, made years ago, been at any time seen. So that your committee are of opinion, that no land in any portion of Maryland can be found, whose soil is poorer and less inviting to the noble efforts of the agriculturist. But this dead soil has been brought to life, and made to teem with the most useful and wealth-producing vegetation by the application of barn-yard and stable manure combined; and to the credit of Mr. Calvert let it be recorded, that this great mass of manure, producing such extensive and decisive results, is the exclusive production of his own farm.

As one item of evidence on which the opinion of the committee is founded, we deem it not improper to let Mr. Calvert speak in his own words. In his prepared statement in answer to the fifteenth interrogatory, he says: "In answering this interrogatory, I beg leave to state, that I cannot ascertain precisely the amount of butter made on my farm, as I have no means of arriving at the amount consumed in my own family; but supposing that the object of the inquiry is to ascertain the amount derived from the dairy, I have to state that I have turned my attention particularly, during the last year, to making my farm a dairy and grazing one; and considering all the disadvantages which one has to contend against in every new pursuit, I think I have been quite as successful as I could expect for the first year. My dairy has yielded me from the first of January, 1846, to 1st October, 1846, in milk, cream and butter, $2,391 98; and this leaves out about the best quarter of the year, so that the revenue of the whole year may be fairly stated at three thousand dollars, or more."

In addition to this, there are from one hundred and fifty to two hundred acres in grasses, yielding from one to two tons per acre, and producing a revenue, after the cows and horses are abundantly supplied, nearly, if not quite equal to that of the dairy.

The committe have taken but little into consideration the wheat, corn and oats, as the former was injured in common with all the wheat in this region, and the latter by frequent and heavy freshets, which were so disastrous to all flat lands having bold streams running through them.

The root crops, which are extensive, it is presumed are planted with a single eye for the benefit of the cows. From this very hasty view, there is one reflection that naturally arises, and it is a cheering and consolatory one to every man who is even possessed of the very poorest species of poor land, and that is, never to despair of his land; a reflection that is akin to the high-toned patriot's resolve—never to despair of his country, though danger may be on the wing, and the clouds may darken and lower around it.

If Mr. Calvert has not found out the philosopher's stone, he certainly has the road to wealth and an honourable fame, by the judicious application of barn-yard manure to the

most sterile soil. An example well worthy the emulation of every man.

The plantation of Col. W. W. W. Bowie, from its rapid and high state of improvement under its public spirited proprietor, merits the highest encomiums of the committee. It has already, in sharp competitions, received the second and third honours. It presents to those that have known it long, some most pleasing considerations; bespeaking management, system and untiring industry.—Galled knolls have been re-invigorated, gullies have been levelled, stumps and roots grubbed up, briars eradicated, wet swamps ditched and reclaimed, embankments to hold the Patuxent in check, erected at heavy expense and with indomitable perseverance, new meadows made and well set in timothy, ornamental trees, and fruit trees of the best varieties, planted out, woods have been felled, and the land cleared and cultivated. Great attention has been paid to manures, and the effects of this great right hand prop of the farmer is clearly discernible on every part of this well arranged, highly cultivated and beautiful plantation. Col. Bowie has overcome many and serious difficulties, showing to the committee and those around him, that he is possessed of the spirit of enterprise, with a head to plan and a hand to execute.

The plantation of Mr. Richard S. Hill evinces much labour and industry, although there is not that beauty and neatness of management which are so pleasing to the eye. This great omission may in charity be attributed to the fact, that the worthy proprietor is a bachelor, and lacks that stimulus and taste for the beautiful and ornamental, which in some cases can only be supplied by the kind and witching influence of a neat and tidy wife, an article in the way of domestic comfort and happiness, your committee with perfect unanimity recommend Mr. Hill to possess himself of right speedily. For his soil is first rate, and its yield abundant.

The plantation of the worthy president of this society, is another evidence of the spirit of improvement which is abroad in the land. He has given to the committee ample evidence, that his efforts are most judiciously applied to the enriching of a soil, which, in its natural and uncultivated state, offered but few temptations to the spirit of enterprise. His system appears well arranged, his houses and farming utensils in good order, his stock well provided for, and every thing around him appears cheerful, contented and happy.

Your committee regret exceedingly, that the limited time allotted to this report prevents them from going into an extended review of many facts and circumstances, well calculated to excite great interest in the mind of every Agriculturist. But they trust that they have presented sufficient considerations to demonstrate, that great good grows out of a worthy and laudable spirit of competition. There are but few honours that confer more real satisfaction, than the honours of an Agricultural society, impartially bestowed; as the evidence of skill and industry, of management and labour. In the quiet of his family, and surrounded by his friends, the successful competitor points with laudable and heartfelt pride to his premiums, as so many monuments, which to him cannot be valued in money. In this he has a higher and holier pleasure than the successful chieftain, whose renown is written in the blood of thousands slain.

Your committee now proceed to the most delicate part of their duty, and that is, to award the three premiums. It is due to say, that, in many instances, they considered the merits of Col. Bowie and Mr. Calvert equal, and their only regret is, that they cannot award to each; but upon a review of every fact and circumstance brought to their consideration—and mainly based upon the written answers of each of those gentlemen to the interrogatories propounded—they have, after due examination and consideration, unanimously agreed to award the first premium to Mr. Charles B. Calvert, for his farm of fourteen hundred acres. As the committee consider it their duty to award the other premiums under the rules and regulations presented to them for their government, a majority have accordingly awarded the second to Mr. Richard S. Hill, and the third to Mr. Robert Bowie. Under the rules, it will be borne in mind that Col. Bowie, having heretofore obtained the second and third, could only compete for the first.

The first named of your committee would here take the liberty to suggest, that the spirit of competition could be rendered sharper and keener, by extending the bounds of competition. As at present constituted, the competitors must be confined to Prince George's county. There is a little river well known as the Patuxent; let that be crossed in the spirit of generous rivalry, and many a gallant spirit, with polished plough and pruning hook, will be found on its eastern banks, ready and anxious to enter the lists.

Your committee cannot conclude their report, without expressing the great pleasure they have derived from their excursion. Social feeling and generous hospitality prevailed at every place where they sojourned. They have derived much pleasure from the general evidences of improvement that were manifested on all sides. There were only one or two spots that presented themselves

in their ride, to mar the general harmony of the scene, and to proclaim that the abode of the sluggard was nigh.

All of which is most respectfully presented.

JOHN S. SELLMAN,
WM. C. OGLE,
JAMES MULLIKIN.

TURKEYS, GEESE, POULTRY, &c.—The number of articles of this description, the produce of the surrounding country, which were brought into the city yesterday, almost defies calculation. The wagons along Second street extended as far south as Christian, and north to the junction of Second street with the Germantown road, being a continuous line—with the exception of the square between Chesnut and Market streets—of not less than three miles in length. Allowing 20 feet to each wagon and the horses attached, there must have been considerably over 700 vehicles, containing on an average, say, six turkeys, six pairs of fowls and two geese each. If this presumption is correct, there were 4,200 turkeys, 8,400 chickens, and 1,400 geese, displayed for sale from the wagons in Second street alone. This is exclusive of an equal quantity offered in the various markets and other stands for wagons, of which there are several. The price of turkeys was moderate, considering the existing demand, varying, according to the size and weight, from 62½ cents to $3. Almost every one had a penchant yesterday for carrying home a fine fat turkey, preparatory to the feasting incident to Christmas.—*Ledger.*

BREAK BAD HABITS.—We often hear persons excuse a bad habit, because, they say, it is impossible to break it. This is not so. The late Mr. Loudon, the celebrated writer on gardening, &c., during the time he was suffering severely from the pain in his arm, found no ease but from taking laudanum; and he became at last so habituated to the use of this noxious poison, that he took a wine-glass-full every eight hours. After the amputation of his arm, however, he wished to leave off taking it, as he was aware of its injurious effects upon his general health; and he contrived to cure himself by putting a wine-glass-full of water into his quart bottle every time he took out a wine-glass-full of the potion, so that the mixture gradually became weaker every day, till at last it was little more than water, and he found that he had cured himself of this dangerous habit without experiencing any inconvenience.—*Exchange Paper.*

THE FARMERS' CABINET,

AND

AMERICAN HERD-BOOK.

PHILADELPHIA, FIRST MONTH, 1847.

SINCE the publication of our last number, we have bade adieu to the old year and welcomed the new. It is a season of congratulation and enlivened hope. The young and buoyant are happy in extended life, and the old—even the grey-headed and tottering—view with more or less of complacency, the privilege attained, but which they had scarcely ventured to look to, of dating another year still further down in the century. It may be well for us to have these fresh starting points—and it may be well that one of them at least, is a lively and animating one. If we glance backward on the past year, and find, as too many of us, alas! must acknowledge, that our progress in what is essentially good, has not kept pace with the revolutions of time's wheel, our bosoms may be stimulated by the cheering impulses around, to increase our diligence, and more thoroughly to appreciate and improve the many advantages of our respective positions. It may be also well to remember, that while his own heart is the garden in which the Christian is most assiduously to labour, and for his own household that he is most carefully to provide, yet "we do not live for ourselves only." It behoves us to watch all our steppings, that we may discharge all our duties. May the year on which we have entered be better spent by all our readers and ourselves, than the last, for then it will be happier—and may every department, both in the heart and on the farm, give evidences of that improved management, which will at least be a ground of hope for *progress.*

THE AMERICAN HERD BOOK, *containing pedigrees of Short-horn cattle: to which is prefixed a concise history of English and American Short-horns, compiled from the best authorities, by* LEWIS F. ALLEN—has been kindly forwarded.

The long list of pedigrees, both of bulls and of cows, will be highly valuable to the breeders of these noble animals, and the history of the breed, which precedes the *Register*, will be carefully read by every admirer of this celebrated breed of English cattle. It is handsomely got up, and apparently with great care.

THROUGH the politeness of the publisher, George S. Appleton, No. 148 Chesnut street, we find upon our table EXPERIMENTAL RESEARCHES, *on the Food of Animals and the fattening of Cattle, with remarks on the food of Man: Based upon experiments undertaken by order of the British Government. By* ROBERT DUNDAS THOMSON, of the University of Glasgow.

We have found opportunity to look but little into this work. Its title, however, indicates its object, and it will doubtless be valuable to observing and calculating feeders, who study and reflect upon all the operations connected with the distribution of the fruits of their labour.

By reference to the minutes of the Philadelphia Agricultural Society, on page 192, it will be perceived that Professor Johnson is delivering at the Hall of the Academy of Natural Sciences, a course of eight Lectures on Chemistry, applied to Agriculture, Horticulture, and Animal Economy. Besides the general views of the subject included in the Introductory Lecture, which was delivered on the evening of the 6th inst., they will embrace—

1. An enumeration of the elementary substances which compose organized beings, with experimental demonstrations of their properties, and their relations to vegetable life.

2. The chief *proximate* constituents of plants—their chemical characters, relations and distinctive forms. Experimental proofs of their respective properties.

3. Soils, their origin, nature and varieties—their organic and inorganic constituents,—chemical reactions of their elements. Analysis of Soils.

4. Supply of food to plants;—causes which facilitate or impede it,—different organs concerned in its reception. Important considerations to the florist and orchardist.

5. Improvement of soils—in their physical properties and chemical constituents—*Manures*, mineral, vegetable, and animal. Irrigation and drainage. Ammonia in soils.

6. Animal bodies—chemical constitution—Nutrition. Growth, distinct offices of the several elements of food. Practical application.

7. Agricultural and horticultural products as food for men and animals,—Results of experiments.

8. Chemical transformations of animal and vegetable substances—natural and artificial. Applications to various economical and domestic arts.

We have no doubt these Lectures will be highly instructive, and sincerely hope our friend will have a class, before whom it will be his ambition to throw out his whole strength.

We have received a *Memoir on Maize or Indian Corn*, compiled with a good deal of labour and research, under the direction of the American Institute, by D. J. Browne. It is preceded by Barlow's poem, written many years ago, on the *Hasty Pudding*.

Now that the extended introduction of this grain is allowed into the markets of Great Britain, its history and uses become more than ever important, both here and in Europe.

A meeting of the citizens of Burlington county, N. J., to be held at Mount Holly tomorrow, is called for the purpose of taking into consideration the expediency of organizing an Agricultural Society.

The farmers and cattle dealers of Chester and Delaware counties, Pa., held a meeting at West Chester on the 29th ult., to take means for petitioning the Legislature to pass a law authorizing the Governor to appoint an Inspector of cattle intended for the Philadelphia market, whose duty it shall be to examine the same, and distinguish between such as are fit for the knife and those that are not. It is said the business of the grazier and fair dealer is greatly injured by the slaughtering and introducing into market the beef of cattle entirely unfit for the table.

Enquiries are frequently made in relation to the effects of *Poudrette* on the corn crop, and the manner of using it. Reference to several of the last volumes of the Cabinet will afford the desired information. We may, however, repeat, that its mode of application is as simple as can be. If spread broadcast over the ground—and this is the preferable plan, if considerable permanency of effect is looked for—it should be at the rate of 20 to 40 bushels per acre, and harrowed in just before planting time. Should the first cost be a matter of importance, a gill or a little more may be dropped in the hill when the grain is dropped: let it spread about a little, and cover it up with the corn. This will require 10 or 12 bushels to the acre.

The demand last spring was greater than our ability to supply, and the effects were so generally satisfactory, that we anticipate again on the opening of the season, a similar lively market. We hope to have plenty on hand for all, and all are invited to give attention to this cheap manure. See advertisement on the last page.

Grigg & Elliott have published a *Rural Register and Almanac* for 1847, in which our townsman, D. Landreth, the Seedsman, No. 65 Chesnut street, has thrown together a great deal of valuable matter for the farmer and gardener.

The quantity of rain which fell in the 12th month, 1846, was nearly three inches and a half. .... 3.437 in.

Penn. Hospital, 1st mo. 1st.

The *Bridgeton Chronicle* says that a hog raised by Thomas Tice, of Deerfield, was lately slaughtered, whose weight alive, was 844 lbs.—when dressed, 731 lbs.

We learn from a Scotch paper, that an enormous turnip was taken up on the farm of Hume Mill, last autumn. It weighed 23 lbs., and measured 39 inches in circumference. It was of the *white globe* species, and the seed was raised by Brumlees, the tenant.

☞ SHORT ADVERTISEMENTS,

The subject matter of which, may correspond with the agricultural character of this paper, will be inserted at the rate of one dollar for each insertion of ten lines or less; and so in proportion for each additional line. Payment in advance.

SEED STORE,

No. 23 Market Street, Philadelphia.

The subscriber keeps constantly a supply of White and Red Clover, and other grass seeds; fresh Perennial Rye-grass, and Lucerne seed. Field seeds, consisting of choice Spring Wheat, Barley, Potatoe Oats, Northern and other seed-corn. Also, in season, Fruit and Shade Trees. Garden and Bird seeds generally. Guano in parcels to suit purchasers.

M. S. POWELL.

Philad., Feb., 1846. tf.

Valuable Farm at Private Sale.

The subscriber offers for sale the valuable FARM on which he has resided for a number of years past, situated in East Bradford Township, one mile west of the flourishing Borough of West Chester. It comprises about 60 acres of naturally fertile and well improved land, under good fence, and well watered. The buildings are of stone, large, and in good repair. The mansion is pleasantly situated, possesses many conveniencies, and is of modern finish, 44 feet front by 32 feet deep, with an eight feet entry, two rooms on each side, besides kitchen and wash-house, and six rooms in the second story. Pure water is introduced into the house and barn-yard by means of a force pump and water wheel propelled by a never failing stream.

The grounds are planted with fruit, ornamental trees and shrubbery, with a good orchard in full bearing. There are also a three-story barn, 40 feet by 56 feet, a carriage-house, work-shop, ice-house, wood-house, and an excellent and convenient milk-house.

This property is eligibly situated on the main road from West Chester to Lancaster, in an unexceptionable neighbourhood, and offers considerable inducements to one wishing to retire from active business, or to engage in agriculture on a moderate scale.

Apply to the subscriber, residing thereon, or to John Lippincott, No. 65 Marshal street, Philadelphia.

CHARLES LIPPINCOTT,
9t. West Chester, Chester county, Pa.

Agency for the Purchase & Sale of

IMPROVED BREEDS OF CATTLE & SHEEP.

The subscriber takes this method of informing his friends and the public, that he will attend to the purchase and sale of the improved breeds of cattle, sheep, swine, poultry, &c., for a reasonable commission. All letters post paid, addressed to him at Philadelphia, will be attended to without delay.

AARON CLEMENT.

Sept. 15th, 1846.

FOR SALE,

AT D. O. PROUTY'S

AGRICULTURAL WAREHOUSE,

No. 194½ *Market Street, Philadelphia,*

Corn-Shellers in great variety, price from $1 50 to $50 each; Hovey's Patent Hay, Straw, and Corn-stalk Cutters; Grant's Patent Fan Mills, for chaffing and screening wheat at one operation, warranted to take out cockle, cheat and smut. Also good Fans, for $14 to $18 each.

Whitman's Horse-powers and Threshing Machines, with Straw Carriers and Fan Mills attached; Spain's Improved Barrel Churns, the dashers of which may be taken out to clean. Cheese-presses, &c.; Centre-Draught, Self-sharpening, Right & Left-hand Ploughs, warranted to give satisfaction in their operation.

September 15*th*—tf.

COATES' SEED STORE,

No. 49 *Market Street,*

FRESH TIMOTHY SEED,

Of various qualities, from good common seed to the purest and finest that can be produced,

TOGETHER WITH A COMPLETE ASSORTMENT OF

GRASS & GARDEN SEEDS,

Of the finest Quality and best Varieties,—Bird Seeds, &c.

JOS. P. H. COATES.
Successor to George M. Coates.

Sept. 15th, 1846.

PHILADELPHIA

AGRICULTURAL WAREHOUSE,

No. 291 *Market Street, North side, between Seventh and Eighth Streets, Philadelphia.*

The subscriber has just received from Worcester, Massachusetts, an assortment of Ruggles, Nourse and Mason's improved Eagle, Subsoil and other Ploughs, which have been so much approved by the principal Agricultural Societies in New England the several last years; also Bennett's Cultivators and Stevens' Self-Feeding Hay and Straw Cutter, a late and very valuable improvement in that kind of implement; Grain Cradles, &c.; an assortment of Ruggles, Nourse and Mason's Self-Sharpening Ploughs of the form and model of those above named, are daily expected. T. F. has and will constantly keep a large assortment of Farming Implements, as Fan Mills, Straw and Hay Cutters, Corn Shellers, Grain Cradles, Scythes, &c., together with Garden Tools of all kinds.

THOMAS FURBER.

May 15th, 1846. 1 yr.

NEW

Horticultural and Agricultural Ware-house,

84 *Chesnut Street below Third, South side.*

The subscriber has for the better accommodation of his customers, opened the above ware-house, with a large stock of Garden and Field Seeds, crop of 1845. Implements and Books on Gardening and Farming; he calls the particular attention of farmers to his pure stock of Sweede Turnips, Field Carrots, Beets and Parsnips, Pruning Shears, Saws and Knives.

March 14th, 1846.—1y. R. BUIST.

COAL.

The subscriber has made an arrangement for a constant supply of superior Lehigh and Schuylkill Coal—carefully prepared for family use, which he will furnish *at the usual cash prices*, on application at the office of the Farmers' Cabinet, where samples of the different kinds and sizes may be seen.

JOSIAH TATUM.

Philadelphia, Tenth month 15th, 1846.

We keep on hand at this office, and will supply our friends with Agricultural works generally. Among which are

THE FARMER'S ENCYCLOPEDIA, full-bound in leather;—Price	$3 50
YOUATT ON THE HORSE, with J. S. Skinner's very valuable Additions;	2 00
BRIDGEMAN'S GARDENER'S ASSISTANT;	2 00
THE AMERICAN POULTRY BOOK;	37½
THE FARMER'S LAND MEASURER;	37½
DANA'S MUCK MANUAL;	50
Complete sets of the FARMERS' CABINET, half-bound, 10 vols.	8 50
DOWNING'S Landscape Gardening,	3 50
Downing's Fruits and Fruit Trees of America,	1 50
SKINNER'S Every Man his own Farrier,	50
AMERICAN Poulterer's Companion,	1 25
BOUSSINGAULT'S RURAL ECONOMY,	1 50
FARMERS' & EMIGRANTS' HAND-BOOK,	1 00
MORRELL'S AMERICAN SHEPHERD,	1 00
STABLE ECONOMY,	1 00
BEVAN on the HONEY BEE,	31½
BUISTS' ROSE MANUAL,	75
THOMAS' FRUIT CULTURIST,	50
SKINNER'S CATTLE & SHEEP DOCTOR,	50
AMERICAN FARRIER,	50
THE FARMER'S MINE,	75
HOARE ON THE VINE,	62½
HANNAM'S Economy of Waste Manures,	25
LIEBIG'S AGRICULTURAL CHEMISTRY,	25
" ANIMAL CHEMISTRY,	25
" FAMILIAR LETTERS,	12½

As well as his larger works on Chemistry and Agriculture.

Subscriptions received for Colman's Agricultural Tour—or single numbers sold.

☞ We are prepared to bind books to order.

GUANO.

Twenty-five tons first quality Ichaboe Guano, in bags or barrels, for sale in lots to suit purchasers, by

S. & J. J. ALLEN & CO.,
No. 7 South Wharves, 2nd Oil Store below Market street, Philadelphia.

October 15th, 1845. tf.

Poudrette.

A valuable manure—of the best quality, prepared in Philadelphia, for sale at the office of the Farmers' Cabinet, No. 50, North Fourth Street, or at the manufactory, near the Penitentiary on Coates' street. Present price, for seven barrels or more, $1 75 per barrel, containing four bushels each. Any number of barrels less than seven, $2 each, or thirty-five cents a bushel. Orders from a distance, enclosing the cash, with cost of porterage, will be promptly attended to, by carefully delivering the barrels on board of such conveyance as may be designated. The results on corn and wheat have been generally very satisfactory. Farmers to the south and in the interior, both of this State and of New Jersey, are invited to try it. We are now able to supply the demand for wheat. JOSIAH TATUM.

CONTENTS OF THIS NUMBER.

Memorial from Agriculturists of the U. States to their respective State Legislatures, ... Page 169
Experiment in Deep Ploughing, ... 171
Cultivation of the Peach.—The Potatoe Failure—Non-liability of a Tenant to pay Rent, ... 172
Bucks County Agricultural Exhibition, ... 173
Good Domestics.—Large Farm in Maryland, ... 174
Milk for the People.—Economy in Cooking Cranberries, ... 175
To Renovate an "Outcast," 176
Potatoe Disease, ... 177
Ploughing Match in Montgomery, Orange County, N. Y.—Fruit Trees.—Weevil, ... 178
How to destroy Weevils, Moths, and other insects injurious to Wheat, ... 179
Observations on the Potatoe Disease, ... 180
Cactus.—Earle's Planting Plough.—How to judge Cattle.—Ag. Statistics of N. Y.—Lime, ... 181
Destroying the Grub and Wire-worm.—Culture of the Grape, ... 182
British Association, ... 183
Landlord and Tenant, ... 184
Wages of Labour, ... 185
Manures, ... 186
Answers to Queries of the State Ag. Soc. of S. C., 187
Officers of Philad. Ag. Soc.—Report on Manure, 192
Best Regulated Farms, ... 195
Editorial Notices, ... 197

THE FARMERS' CABINET,

IS PUBLISHED MONTHLY BY

JOSIAH TATUM. No. 50 NORTH FOURTH STREET, PHILADELPHIA.

It is issued on the fifteenth of every month, in numbers of 32 octavo pages each. The subjects will be illustrated by engravings, when they can be appropriately introduced.

Terms.—One dollar per annum, or five dollars for seven copies—*payable in advance.*

All subscriptions must commence at the *beginning* of a volume. Having lately struck off a new edition of one or two of the former numbers, which had become exhausted, we are now able to supply, to a limited extent, any of the back volumes. They may be had at one dollar each, in numbers, or one dollar twenty-five cents half-bound and lettered.

For seven dollars paid in advance, a *complete set* of the work will be furnished in numbers, including the 11th volume. The whole can thus readily be forwarded by mail. For twenty-five cents additional, per volume, the work may be obtained neatly *half-bound and lettered.* Copies returned to the office of publication, will also be bound upon the same terms.

By the decision of the Post Master General, the "Cabinet," is subject only to newspaper postage. To any Post office within thirty miles of Philadelphia, they will go free of charge.

Joseph Rakestraw, Printer.